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OF GREAT BRITAIN AND IRELAND.

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ORDINARY MEETING.

NOVEMBER 7TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election, as Fellows of the Institute, was announced of the following:—  
Mr. G. F. LAWRENCE, Miss S. E. RUCKER, Mr. A. S. QUICK, Dr. J. W. WILLIAMS,  
Mr. J. F. TOCHER, Mrs. K. LEE, Mr. F. W. CHRISTIAN, and Mr. R. C. MACLAGAN.

The PRESIDENT regretted that Lieut.-Colonel MACDONALD was prevented by illness from reading his paper.

Mr. WM. CROOKE then read Lieut.-Colonel J. R. L. Macdonald's paper:—  
"Notes on the Ethnology of Tribes met with during progress of the Juba Expedition of 1897-99," and Dr. GARSON exhibited a series of lantern slides illustrating the paper.

Discussion was carried on by Captain MALCOLM, Mr. CROOKE, Mr. G. L. GOMME, Mr. SHRUBSALL, Mr. BOUVERIE PUSEY, Sir THOMAS HOLDICH, and others.

The PRESIDENT, after pointing out the value of such papers, and the difficulty Lieut.-Colonel Macdonald must have had in collecting such information, amongst the other duties of his position, closed the proceedings with a vote of thanks to Lieut.-Colonel Macdonald for his paper, to Mr. Crooke for reading it, and to Dr. Garson for exhibiting the slides.

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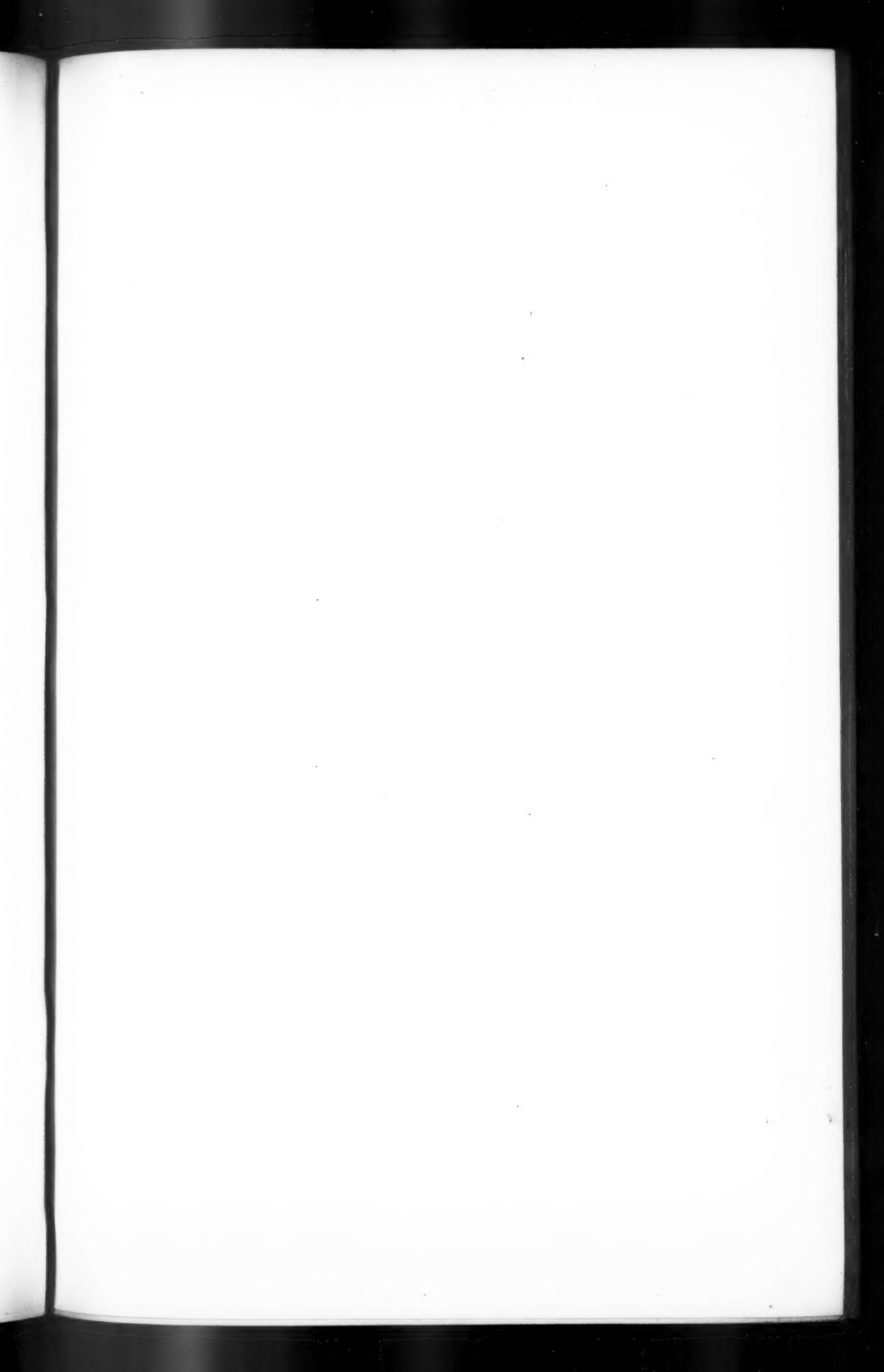
NOTES ON THE ETHNOLOGY OF TRIBES MET WITH DURING  
PROGRESS OF THE JUBA EXPEDITION OF 1897-99.

BY LIEUT.-COLONEL J. R. L. MACDONALD.

DURING the travels of the expedition which I had the honour to command, we came in contact with between thirty and forty native tribes, and were able to collect a series of notes on their languages, customs, and traditions, meagre indeed, but still of interest. In some cases the information is new, and in others it tends to support the views of previous travellers, or modify their speculations by the provision of additional data. The expedition had neither the time nor the scientific training necessary for the task of solving the many most interesting problems regarding the true classification and grouping of these various tribes in the general scheme of the African races, or of tracing the various migrations that must have led them to their present geographical distribution. That must be left to experts, and the expedition will be content if it has supplied a few additional facts to guide the experts to the solution of the problems.

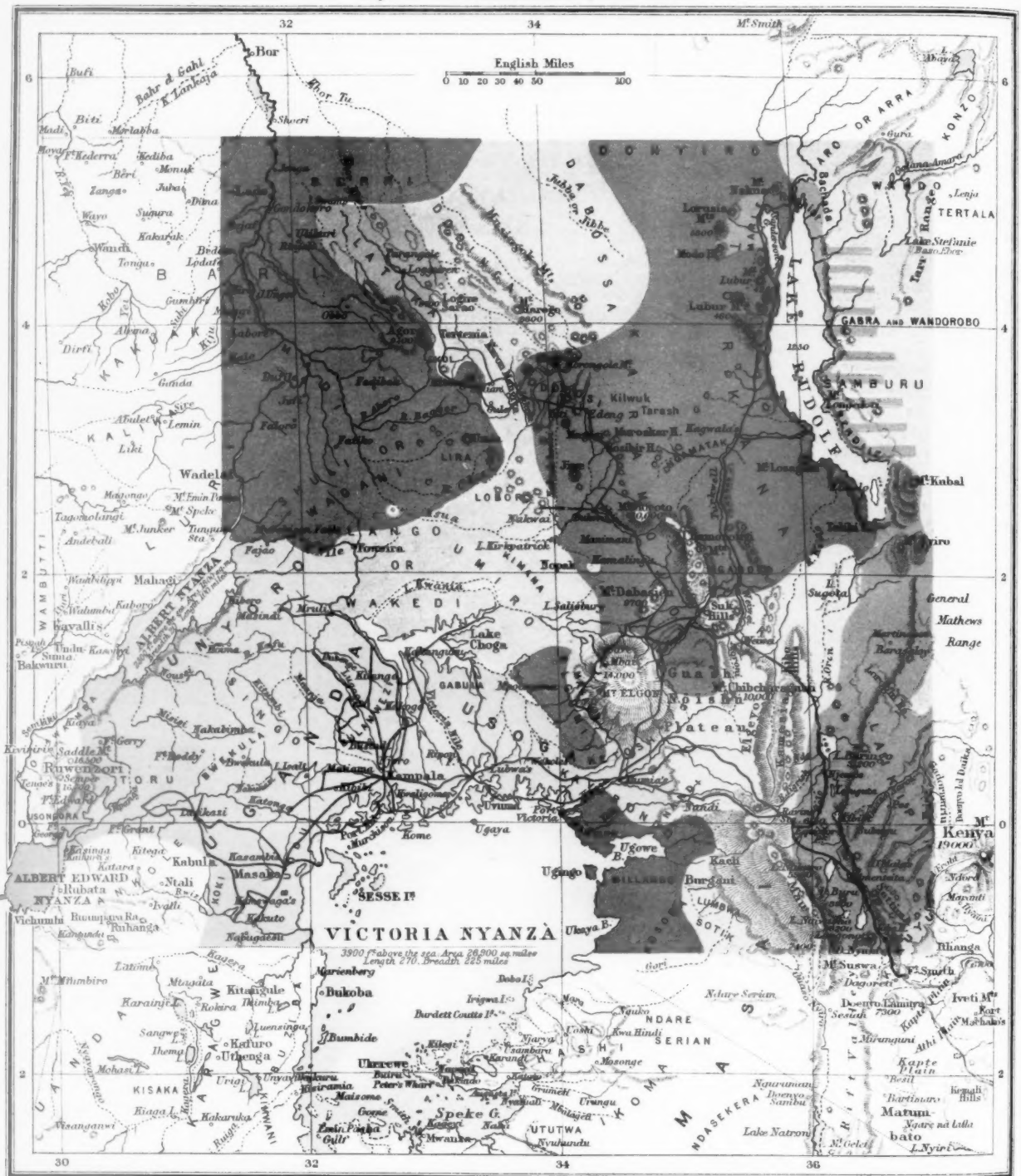
The regions, in which the labours of the expedition lay, are singularly interesting from an ethnological point of view, comprising as they do the meeting-place of several great African families, the Bantu, the Negro, the Hamitic and the Masai or Nuba-Fulla. In endeavouring to compile a few notes that may be interesting, I would purpose to consider the language, customs, etc., of the tribes encountered in five groups, without prejudice to their ultimate inclusion in any of the great African races. The grouping I propose for the purpose of this paper is one that I was led to adopt from the apparent connection of the tribes, and whether or not it may be scientifically accurate, it is at all events convenient, as whatever race the group may be ultimately included in, it will probably carry with it all its component members. This grouping is as follows :—

<i>Nuba-Fulla ?</i>	
Masai.	Langu.
Kwafi.	Rom.
Sambur or Kore.	Lango or Wakedi.
Latuka.	Umiro.
Karamojo.	Kimama.
Turkana.	Wahima ?
Donyiro.	<i>Suk ?</i>
Elgumi.	Suk.
	Nandi.



# I.—MAP OF UGANDA AND ADJOINING TERRITORIES ILLUSTRATING THE PRESENT DISTRIBUTION OF THE ALLIED TRIBES

By J. R. Macdonald, Lt. Col.



## EXPLANATION OF COLOURING

	Karamojo		Suk-Nandi Group
	Lango Tribes believed to be allied to the Karamojo		Negro
	Masai and Latuka		Bantu
			Somali, etc.

*The relative territory of Eloegop, Suk-Nandi, and Karamojo is probably fairly reliable*

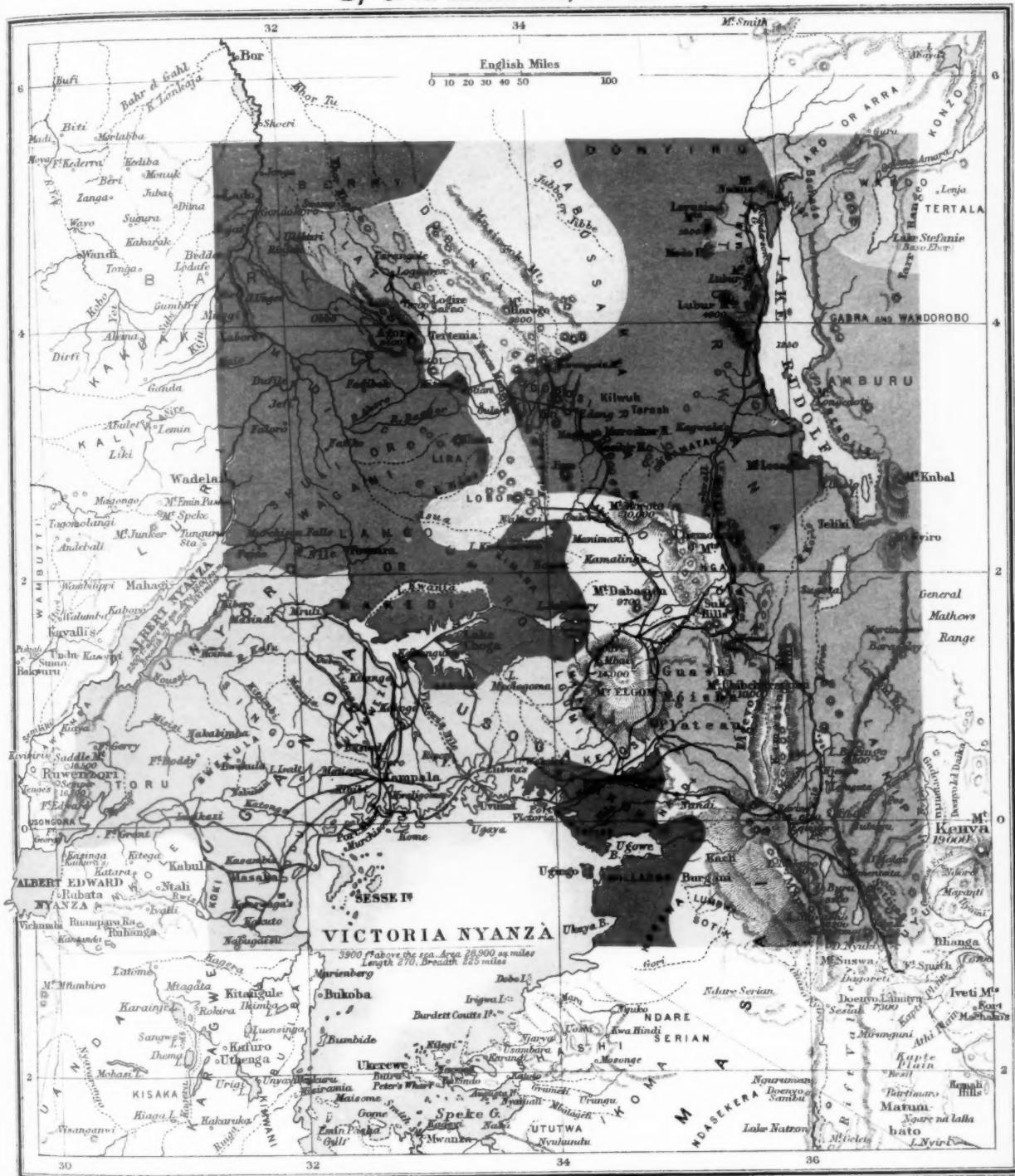
*The contemporary distribution of the Lango, Bantu, and Negro Tribes as shown  
is however uncertain, and is here to be considered as only a suggestion*

Route of Col. Macdonald's Expedition shown thus:—



## II.—MAP OF UGANDA AND ADJOINING TERRITORIES ILLUSTRATING FORMER EXTENDED DOMINION OF THE ELOEGOP (MASAI)

By J. R. Macdonald, Lt. Col.



### EXPLANATION OF COLOURING

	Karamojo		Suk-Nandi Group
	Lango Tribes believed to be allied to the Karamojo		Negro
	Masai and Latuka		Bantu
			Somali, etc.

*The relative territory of Eloegop, Suk-Nandi, and Karamojo is probably fairly reliable*

*The contemporary distribution of the Lango, Bantu, and Negro Tribes as shown  
is however uncertain, and is here to be considered as only a suggestion*

Route of Col. Macdonalds' Expedition shown thus: —



Kamasia and Elgeyo.  
Lumbwa and Sotik.  
Lako.  
Save, Sore, etc.  
Anderobo.

*Bantu.*

Wagandu.  
Wasoga.  
Wanyoro.  
Watoru.

Wakavirondo.  
Waketosh.  
Masowa.

*Negro.*

Shuli.  
Nyifa or South Kavirondo.  
Madi.  
Bari.  
Beri.

Many of these tribes have been so fully dealt with by others that they need not be further referred to here, but the remaining tribes I propose to deal with by first (*a*) Considering the connection in language; (*b*) furnishing some information regarding their habits and customs; and (*c*) giving a few brief notes on their history as it could be obtained from their own traditions or deduced from those of their neighbours.

*(a.) COMPARATIVE VOCABULARIES.*

The comparison of languages by means of meagre vocabularies is unsatisfactory in many respects; but in the case of an expedition which travels rapidly and cannot afford the time for the construction of grammars, the comparison by vocabulary is the only one possible.

It must, however, be remembered that the vocabularies collected by the expedition were not taken from slaves at a distance from their own countries, but were in almost every case the result of actual travel amongst the tribes concerned.

Comparative vocabularies of twelve languages, in addition to Swahili (the general medium of conversation), are attached. Of these twelve, two, the Ogaden Somali and Borana Galla, were taken down from Somalis who accompanied the expedition for purposes of comparison with the other languages; as they may be of interest I have allowed them to stand in the tables accompanying this paper. Each vocabulary given shows about 108 words. Unfortunately Mr. C. Hobley, who had collected vocabularies of certain languages, could not furnish me with a list of the English words he used, and so only some forty words are common to his and my own vocabularies; still this is better than nothing and renders the two sets of vocabularies mutually useful.

The expedition vocabularies embrace the languages of the following tribes:—Usoga, North Kavirondo, Masai, Karamojo, Latuka, Nandi, Anderobo, Save, Suk and South Kavirondo. The people of Kamasia and Elgeyo talk the same language as the Nandi, and the Turkana and Donyvio have the same language as the Karamojo.

Mr. C. Hobley gives vocabularies of the following:—North Kavirondo, Muhasa, South Kavirondo (Nyifa or Nife), Elgumi, Nandi, and Lako.

As already stated some forty words are common to both sets of vocabularies, so we can, to this extent, construct a comparative vocabulary of the languages talked by some fifteen of the tribes in the area under discussion. Casati's vocabulary of Lur, which is stated by Emin to be closely allied to Shuli, has a good many words common to one or other set of vocabularies, and shows that South Kavirondo is allied to those languages; and as the Kwafi and Samburu languages are merely dialects of Masai, we may say that we can to some extent extend our comparison over nineteen languages.

With regard to the expedition vocabularies care was taken by questioning several men to secure accuracy in obtaining the correct corresponding word. That this was invariably successful is hardly probable; but still it is hoped that the results of our efforts towards strict accuracy will be found fairly reliable.

The vocabularies of Usoga, North Kavirondo, Masai, Karamojo, South Kavirondo, and Suk were obtained direct from natives of these tribes; the languages of the Nandi and Anderobo were got from a Suk Government interpreter; the Save vocabulary was taken down from a Swahili who had been long resident in the district and knew the language well; while the Latuka was from the Latuka Soudanese who had been some time in that country and had Latuka wives. Kiswahili was the medium of communication in every case except Latuka when Arabic was employed.

The words have been written in English characters as nearly phonetically as possible, but in dealing with savage languages and unfamiliar sounds it is very difficult to express the exact sound in English characters. The "l" and "r" are practically interchangeable in many cases, and the sounds of "p" and "d" may almost imperceptibly slide into "b" and "t," while the hard "g" and "k" are frequently nearly alike. Again there are some nasal sounds in Masai, Karamojo and allied languages that are difficult to express; these have been shown by "ng" or "n" as most nearly representing them.

We may now glance at the general results, Masai, Kwafi (or more properly Guash Ngishu, for Kwafi is a Swahili term), and Sambur (or Kore) are three divisions of the one tribe, the Eloegop, and speak what may be considered one language with slight dialectic differences. This was noticed by Farler, as regards the two first-mentioned, from vocabularies made out by missionaries before Masailand was actually visited by Europeans. Extensive vocabularies of Masai and Kwafi have been compiled by Krapf and Erhardt, and Cust groups this language with the Nuba-Fulla.

We found that the language most nearly allied to that of the Eloegop, though widely separated in geographical position, was that of Latuka in the Nile Basin. The classification of this language had previously been a matter of dispute. Cust in his *Modern Languages of Africa* places it in the Negro group, but notes that Baker in his *Nyanza* remarked that it was quite distinct from that of the Nile tribes he met. Baker was inclined to think that the people of Latuka were Gallas, while Emin placed them among the Langos, whom Cust classes in the

Hamitic group, and Ravenstein in 1884 from Emin's vocabulary considered the Latuka were Masai. The Latuka can hardly be called Masai, but the great similarity of their languages, extending as it does to some thirty per cent. of the words, would appear to show a common origin.

The Latuka and Eloegop must, however, have been separated for a long interval as there are marked differences in the intonation of certain words, the Latuka being on the whole the softer language.

Closely allied to the language of Eloegop and Latuka, but with rather more divergence, comes that of the Karamojo Turkana and Donyiro, which has, however, sufficient similarity to indicate a common origin. It is noticeable that the syllable "ak" which begins so many Karamojo words is not so very different in sound, as might be supposed by the spelling, from the "ng" which appears in Masai, the "g" of which is very hard and almost "k".

I was unable to get a comparative vocabulary of Elgumi, but fortunately Mr. C. Hobley secured one, and this shows that the language of the Elgumi may be considered a dialect of Karamojo. I may here mention that Elgumi is a name applied by the Masai not only to the tribe west of Mount Elgon but also to the Turkana and possibly to the Karamojo. It is not a name recognised by the tribes themselves, and would appear to be a nickname applied by the Masai to their tribes on account of their well-developed noses. The term Elgumi is thus somewhat indiscriminately used by the Masai for the Karamojo tribes, in the same way as "Lango" is used by the Nile tribes to the west to designate the same people.

We thus find the Masai, Guash Ngishu (or Kwafi), Sambur (or Kore), Latuka, Karamojo, Turkana, Donyiro and Elgumi speaking languages which would appear to clearly indicate a common origin.

So far we have been on fairly solid ground, but with regard to the other tribes I have provisionally placed in the same group, information at our disposal is hearsay. The people of Langu and Rom were visited by the expedition, but vocabularies were not collected. We were, however, told by our Karamojo guides that these small tribes were allied to themselves and spoke a nearly identical language. I am inclined to think the same thing applies to the Lango or Wakedi, the Umiro and Kimama. It is doubtful whether these last names do not refer to one and the same tribe. The Karamojo know the powerful tribe dwelling north of Lake Salisbury as the Kimama and say their territory extends far to the west. They do not know the term Lango or Wakedi and appear to know little of Umiro. The territory they ascribe to the Kimama would appear to be so extensive as to embrace a considerable portion of the country which is said by the Waganda, Wangoro and Shuli to be occupied by the Lango and Umiro. I have already pointed out that "Lango" is a far-reaching term as employed by the Nile tribes and is used to embrace the Karamojo themselves. Wakedi or Bakedi (the naked people) is simply a Luganda and Lungoro nickname applied to the Lango. I am accordingly inclined to think that the tribe might be called Umiro and that the



Umiro are known on the east as Kimama and on the west as Lango. They would, however, appear to be allied in language to the Karamojo, but it appears to me that they are not a pure bred tribe, but an admixture of Karamojo and Nilotic and perhaps aboriginal blood. It is to be noted that while the Eloegop, Latuka, and Karamojo are largely pastoral and dwellers on the more open plains, the peoples of Rom, Langu, Umiro and Lango are for the most part highlanders, while the Kimama are dwellers in swampy country. Still the balance of evidence would seem to show that these last mentioned tribes are more or less allied to the Karamojo group.

This latter group would appear even more extensive, as our Swahilis told us of another tribe north of Karamojo called Dabosa which speaks the same language as Karamojo, and the Dodinga (or Irenga) tribe would also appear allied to this. The group of languages we have so far considered are apparently connected to the extent of 30 or 40 per cent. of their words, but now we come to another group, the Suk-Nandi, which, while possessing a still larger percentage of words common within the group, has comparatively a small percentage of words which appear in the languages of the Masai group. The percentage is lowest, about 5 per cent., in the case of the Latuka, which is geographically most removed, and rises to about 11 per cent. in Masai and Karamojo, which are conterminous with the Suk-Nandi country. It is interesting to note that the group now dealt with has almost the same percentage of words common to the language of Ogaden Somali, a Hamitic family.

It had previously been noted that the Nandi, Lumbeva and Sotik were the same, or a clearly allied people, and more recently that of Nandi Kamasia and Elgeyo tribes appeared identified. Mr. C. Hobley, to whose study of the languages of his district we owe so much, further established a close connection between the Nandi, Lako and Save. It was, however, left for the expedition not only to confirm Mr. Hobley's deductions, but also to bring into the same group the Suk, and an even more interesting fact, the Anderobo, formerly classed as a Helot tribe.

With the exception of the Anderobo, who are Helots to the Masai and are admitted by their masters to have been the original inhabitants of Central Masailand, the remaining tribes of this group are mountaineers, who not only possess what is almost a common language but who also show a great similarity in many of their customs.

These connections, together with the present geographical distribution of the tribes and their own legends, would show that they form fragments of a large tribe, which occupied an extensive tract of Masailand and South Karamojo prior to the advent of the Eloegop. This is further confirmed by the inclusion of the Helot Anderobo in the Suk-Mandi group of languages. The northern members of the group show more connection in loan words with the Karamojo, the southern members with the Masai, and this is in harmony with the tribal traditions to the effect that they were respectively partially dispossessed by Karamojo and Eloegop.



A further interesting fact in this connection is that the Suk headdress favour the Karamojo as the Mandi one does the Masai.

The well-marked Bantu group need not be dwelt on. But it may be interesting to note a few points regarding Ketosh and Masawa. I have called the Bantu tribe north of the Nzoia River and south of Mount Elgon Ketosh, and confined the term Masawa to the region west of Mount Elgon. It must however be understood that Masawa is sometimes used in a wider sense to embrace Ketosh, and that the inhabitants of both regions would appear to belong to one tribe or to be very closely related. Mr. Hobley, who first established that there were Bantu speaking people on the west of Mount Elgon, was inclined to show a wedge of Elgumi separating what I call Masawa into a northern and a southern portion. During our journey to the west of Mount Elgon, however, we found tribes he had classed with the Elgumi; the Ngoko, for instance, were Bantu, and on discussing this point with Mr. Hobley on our return he was inclined to agree with us that the western slopes of Mount Elgon might all be classed as Bantu. The people of Ketosh and Masawa, though they have much in common with the Bantu Kavirondo, have certain marked resemblance to the Wasoga, and it is interesting to find that the language of Usoga would appear to bear a far closer connection with Masawa than with North Kavirondo.

Of the Negro group of tribes I have little to say. Mr. Hobley had already established the fact that the people of South Kavirondo or Nyifa (Nife) belonged to this group, a fact borne out by the connection between the Nyifa and Lur vocabularies. The Lur and Shuli languages are closely connected, as has been pointed out by Emin, who also found they were so closely related to Shilluk, that his Shilluk soldiers could easily make themselves intelligible to the Shuli. The Bari and Beri are supposed to be connected with the Dinka, and the Madi with the Nyambara (Cust) or Makaraka.

There are evidently fragments of still older tribes scattered about in this great area the study of whose languages would be interesting. Thus the Lako, Save and Masawa told us of a small scattered tribe, called the Elgonyi, who dwell on the upper slopes of Mount Elgon. Similarly the people of Latuka said that amongst the lofty mountains south-west of the Latuka valley, there were a number of small tribes with a language differing from that of the Latuka and Nile tribes. Donaldson Smith found a small separate community called Dume, north of Lake Stephani; and Austin was not able to connect the Marle north-west of Lake Rudolf with the surrounding tribes, though they bore some resemblance to the Masai or Sambur.

#### (b.) NOTES OF CUSTOMS OF VARIOUS TRIBES.

The Masai group including the whole of the Eloegop, the Latuka, the Karamojo, Turkana, Donyiro, and Elgumi are, for the most part, pastoral dwellers in open grass plains. Agriculture is, however, practised to some extent more especially in Latuka, Karamojo and Elgumi. With the one exception of Latuka,

where there is a recognised king, the remaining members of the group are split up amongst a number of petty chiefs, who, however, combine in case of war. Internal strife is, for the most part, avoided by strict laws regarding the settlement of disputes; this has, however, become rather lax amongst the Eloegop, who have in consequence become much weakened by civil war and are fast losing their power.

The members of this group dwell in considerable villages or groups of villages, permanent and large in the case of Latuka, semi-permanent in the case of Karamojo and Elgumi, and movable amongst the Eloegop and Turkana.

It is doubtful what is the religious belief of the Latuka, but the other members of the group believe in one Supreme Being and in a future life, though there is also a belief in the power of rain and locust doctors.

There is amongst all much the same general organisation for war, and two fighting chiefs are appointed on mobilization. The fighting weapons are spear and shield; bows and arrows are hardly used at all. A few old men amongst the Masai possess these weapons, but poison is not employed. The northern members of the group, however, use the throwing spear as a missile. All the members of the group are brave and courageous and are much feared by their neighbours. They are, however, open and manly, and not given to treachery as a rule.

The tribes to the west, whom I have already mentioned as being probably of mixed origin though allied to the Karamojo, are more agricultural and dwell in more difficult country. They also appear to be more treacherous, but use much the same weapons as the Karamojo.

The knowledge of working iron, dressing hides, and making pottery is universal. The males are, for the most part, naked; the females more or less decently dressed.

In view of the recent medical theory on the connection between mosquitos and malarial fever, it is interesting to note that amongst some members of the group it is a well-established article of belief.

The following more detailed account of the customs, etc., of the Masai and Karamojo are given :—

*Masai.*

The men are mostly tall, the women of medium height. The hair is woolly. Prognathous features are never seen. Their muscles are not, as a rule, well-developed, but they are active.

*Mode of Subsistence.*—Mainly by pastoral pursuits. Cooking is primitive when obliged to eat vegetable food, this is prepared by boiling; but they live, when possible, on milk and meat, the latter raw, or nearly so.

Their huts are little more than dome-shaped shelters, either thatched or covered with hides, each with a small door. A collection of huts is enclosed by a thorn zareba. If obliged by scarcity of cattle, sheep, or goats to take to agriculture, they grow millet.

*Religion and Customs.*—A young man is not supposed to marry until he has

blooded his spear. He sends a jar of honey or small present to the parents of the girl he wishes to marry. If they accept this, it is a sign his suit is approved of. He then sends four oxen, and three goats, and the bride's mother brings the girl to his hut, where the bridegroom has milk in readiness. The bride refuses to enter until she is given a goat. There is no ceremony, but the bridegroom wears the bride's skin petticoat, smeared with fat and red earth for a month after marriage. There is no limit to the number of wives. A wife who misconducts herself three times may be returned to her parents, who refund the present received from her husband.

Women with child are fed on light diet. After birth both mother and child are given the fat of goats, and a mixture of blood and milk. The first appearance of milk teeth on the left before the right is considered a bad omen. A child is named after two months. On death a chief may be buried; lesser people are carried outside the kraal and left to the hyenas.

The Masai believe in one Supreme Being, called "Ngai," and in a future state. The Supreme Being is always invoked for success on the war-path.

Before starting on the war-path, the Leibon is consulted, and medicine made. The warriors then, for some time previous to the start, retire into the jungle and eat flesh, which is supposed to make them fierce.

Two fighting chiefs are selected, and the war party assembles. An ox is then killed, and the Leibon makes a fire; each warrior lights his fire from the central one, and after the ceremony is irrevocably committed to the war-path.

In dividing spoil, a place is selected some four days' march from home. The war party then select nine men as arbitrators, all of whom must be good warriors. These arbitrators then call out the warriors one by one, and allot to each his share. If any man objects, his objection is considered, and, as an ultimate resort, he fights one of the arbitrators, with knobkerries and shields as a rule. If he fails to defeat the arbitrator, he gets nothing; if he kills him, he is himself put to death.

If in peace a man kills another, all his cattle are given to the victim's father. If he wounds another, nothing is done if the wounded man recovers; but if he is permanently disabled, a fine of oxen up to nine is paid.

In settling serious disputes by oath, each disputant takes hold of a goat or sheep, which is then cut in two. This is done in presence of witnesses, and the matter thus settled is not supposed to be reopened.

A minor oath as to a statement is taken by biting a piece of grass.

*Arts and Manufactures.*—Raw hide is made into shields and scabbards, and used for clothing.

Tobacco is smoked in pipes or used as snuff.

A fermented liquor is made from millet.

Their ironwork is manufactured for them by their subordinate Wanderobe.

*Personal Ornaments.*—The lobule of the ear is pierced and enormously distended; they wear a cylindrical block of wood in the aperture.

The hair of both sexes is plastered with grease and wet clay, and plaited into a number of small tails.

An operation resembling circumcision is practised on the men, and a special mutilation on the women.

The ordinary dress of the men consists of one or two goat-hides; they have no idea of decency; but the women are well covered with similar hides.

Both men and women plaster the body with grease, generally mutton fat, and red clay. The married women shave their heads; they also wear a high collar of rings of iron superimposed one above another; the forearms and the legs, for several inches above the ankle, are covered with similar rings.

When in fighting dress, the men wear an arrangement of feathers in a ring surrounding the face, a skin, generally of the Colobos monkey, fastened round the neck and hanging down the back, and strips of Colobos hide round the ankles and surrounding the leg just below the knee.

The chief weapons are spears, swords and shields. The spear is a characteristic shape, and meant only for use at close quarters; the blade is of the shape of a double-edged, straight sword, and is of great length; the shaft, of wood, is merely long enough to afford a grip; the blade is balanced by a long pointed, cylindrical piece of iron as a pommel.

The swords are usually short; they are of a spatulate shape and double-edged. The grip is wound round with a strip of hide. The scabbard is of wood covered with hide.

The shield is large, oval, and convex in front. It is painted in red and white clay pigments. The devices used are various.

Bows and arrows are not unknown, but are not used in action, being mostly confined to the old men.

*Barter.*—Brass and wire, especially iron wire, are in demand. Beads and cloth are also taken in exchange for native products.

#### *Karamojo.*

The men are almost nearly all well over medium height. Many attain a height of 6 feet 2 inches, and several individuals of the height of 6 feet 4 inches or 5 inches were observed.

The physical development is, as a rule, magnificent. The only peculiarity in build is that the clavicle is often short, so that an appearance of narrowness is given to the shoulders.

They are active, and run with exceptionally good action.

The women are of medium height. The prognathous type is very rare; the features are generally well developed.

The tribe has a great reputation as warriors.

*Mode of Subsistence.*—Chiefly by agricultural pursuits, they have also large herds of cattle, sheep, goats and donkeys.

The chief crop cultivated is millet.



Agricultural implements consist of hoes, either with a long or short shaft.

The millet is cooked either by parching the grain or by heating a mass of millet flour with water.

The huts are small and round, with wattle walls and conical thatched roofs. The furniture consists of small wooden stools, also used as pillows at night.

*Religion.*—An indefinite belief in a Supreme Being and in the ghosts of ancestors appears to constitute their faith. The Supreme Being is known as "Akuja," and is invoked to protect the crops and for success in war.

Dead bodies seem, as a rule, to be merely deposited outside the villages to be eaten by hyenas, etc. The bodies of chiefs are, however, buried.

Marriage is not a matter of barter as amongst most tribes. The girl can veto the arrangements, and hence is regularly courted, her parents not interfering in any way until her wishes are known.

If a wife misconducts herself three times she may be returned to her father's house, the latter returning to her husband the present originally received. There is no limit to the number of wives.

There are strict rules regarding disputes, which, if serious, are adjudicated on by a council of chiefs. Homicide is severely repressed. Murder is punished with death. Accidental homicide may be pardoned the first time, but a second case is punished with death.

In war two fighting leaders are selected by the council of chiefs, and under these leaders are the various communities each under its own local chief as his representative. The division of spoil is carefully regulated.

When a child is born it is given blood as well as milk. If it develops milk teeth on the left side before the right, it is a bad omen, and a goat is sacrificed; but the child is not put to death as amongst some other tribes. The child receives a name which, in the case of a boy, is altered when he has been on the war-path. There is no fixed rule against a young man marrying before he has killed an enemy or been on the war-path, but as this is a warlike tribe and the women are allowed a voice in matrimonial arrangements, it is more or less a custom that a young man must distinguish himself in war before marrying.

They believe in omens, and before a raiding expedition consult the entrails of a goat.

They also believe in "medicine" for production of rain and to ward off locusts. In the former case a black ox is killed and its blood caught and mixed with water in an earthen pot; a fire is then lighted and extinguished with the blood and water. Rain is supposed to follow if there has been no irregularity in the ceremony.

To ward off locusts a red-headed goat is selected and killed by a blow on the head; its stomach is then taken out and cast in the direction from which the locusts are coming; this is supposed to turn them.

A solemn oath is taken in the following way: A black ox is selected and speared, the interested parties then take hold of a leg each, and these are cut

from the body; each then partakes of the marrow from the leg he has thus received.

*Arts and Manufactures.*—A rude kind of black earthenware pottery is made.

Tobacco is smoked; the pipe in common use is fitted with a gourd, which is filled with water, through which the smoke is drawn.

The only intoxicating liquor is a fermented drink made from millet.

Iron is the only metal worked; their weapons and implements are well made.

*Personal Adornments, etc.*—Marking by raised cicatrices is practically universal. Ear ornaments consist of a number of small rings, passed through the free edge of the ear. The lower lip is usually pierced, and a small piece of wood, ivory or brass wire inserted.

A characteristic ornament worn by men of importance is a collar formed of rings of iron lying one above another, and kept in position by vertical stays of the same metal. The arms are generally decorated with large bracelets of ivory.

The headgear of the men consists of a large mat of hair worn on the back of the head, and secured by a string passing round the forehead. This is supposed to be made from the hair of the wearer's ancestors. The men go about absolutely naked—the women wear small skins.

Circumcision is not practised.

The women wear necklaces of imported beads, and also made of small circular pieces of ostrich egg-shells, and of the vertebrae of snakes, with the ribs removed.

Weapons consist of spears and shields. The spears are formed for either thrusting or throwing; the heads are small, and of a bay-leaf shape; the neck of the blade is long and forms a considerable portion of the shaft. The edge of the blade is kept very sharp, and is protected by a rim of hide. The shields are very small, of an oblong shape, with concave lateral edges. The ivory bracelets worn on the forearm are very long, and are apparently so made as a means of protection. Knobkerries are also used, both for striking and throwing.

Many warriors also wear a circular iron bracelet, with a sharp cutting edge, for fighting at close quarters; the edge of this is, like the spear-head, protected by a leather rim, which can be sprung off at once; to prevent this iron disc cutting the wrist, it is set into a leather bracelet, which protects the skin.

The expedition was a long time in the country of Karamojo, and our relations with this people were most friendly throughout. This was much facilitated by the fact that they had a tradition that white men would ultimately come to rule the country. As we were the first white men to enter Karamojo, the natives said the tradition had been fulfilled, and that the country was ours.

The Karamojo were a singularly honest people, the most honest savages I had ever met. We bought large quantities of food from them, some 400 sacks of grain, the rate of exchange being one goat for a sack of millet. They always expected to be paid in advance, and on stating how many sacks they were prepared to provide, took away that number of goats and empty bags. In one,



two, or three days according to the distance of their homes from camp, they returned with the grain, and in no single case were they dishonest. On another occasion we paid a man seven goats to guide us for a month. After three days, however, he said he did not know the road we proposed taking and would rescind the contract. With this intimation he disappeared, and it was not until many a month later that we got back to our standing camp at Titi, when I found, somewhat to my surprise, I admit, that the absconding guide had returned the seven goats to the European in charge of the camp.

They have a very practical way of encouraging industry in the young. A child gets a smaller ration than an adult. But when the child grows up, and complains that the reduced ration is no longer sufficient it is presented with a hoe and told to assist in the common cultivation, if it expects an adult's fare.

The *Suk-Nandi group* are mountaineers and dwellers in forest regions. They have this in common that they do not live in villages, but in scattered hamlets of one or two houses, each with its own small patch of cultivation which produces little more than is necessary for the inhabitants. These patches of cultivation are, however, often irrigated with some skill. The natives are not, however, dependent on agriculture alone, as they have considerable flocks of goats and sheep and some cattle. Fowls are also kept, which is not the case amongst the Masai and kindred tribes. Amongst the Suk group of tribes both sexes are of medium height and slightly built. They are, however, active. The features are generally good, and only amongst the Suk and Anderobo does slight prognathism exist.

The tribal organisation is more poorly developed than amongst the surrounding tribes, and the power of combination seems small except perhaps amongst the Nandi and Suk.

The weapons used are bows with poisoned arrows, spears and shields. The members of this group are treacherous and unreliable with a few exceptions. They appear to have a vague belief in a Supreme Being, but very little is known of their religion.

Skins are cured, rude earthenware made, a fermented drink is prepared from millet, and iron is worked in the various districts, except Save, where iron implements are imported.

Except among the Suk, no disfigurement except ear-piercing is practised. Ear ornaments, generally of iron or brass, are worn in a perforation of the lobule. The males are naked; the females wear a short petticoat. The form of headdress is various. The Suk use the felted hair bag of Karamojo, while the Nandi, Lako and Save affect the Masai style.

A more detailed description of the Suk is given below:—The men are of medium height; the women are short in stature. Slight prognathism is common. Muscular development is fair.

*Mode of Subsistence.*—Those who dwell in the hills live by agriculture;

irrigation is employed. Those who live in the plains, in the east of the Suk country are pastoral. Game is caught, chiefly by loop snares attached to heavy logs. The millet, which is the principal grain cultivated, is made into a coarse meal and cooked as a stiff porridge.

The huts are circular in plan, the walls made of upright poles plastered with mud, and the roofs, which are dome-shaped, are thatched. The houses are scattered and are not stockaded.

Iron hoes are used for cultivating.

*Religion and Customs.*—The Suk believe in a Supreme Being called "Akisomlorot," and have some idea of a future state. They pray for success in war. They do not appear to believe in rain or locust doctors.

A young man may marry before he goes on the war-path. He presents the parents of the girl he wishes to marry with a sheep. If they accept this, and thus signify that they agree, he returns in two days with a present of cattle and takes the girl away. If she objects, he waits and catches her outside the house and takes her to his hut. This relic of marriage by capture was also noticeable amongst the Save, where, however, the bridegroom may be assisted in the pursuit of the girl by a party of his friends.

On reaching the bridegroom's hut, the bride refuses to enter until the child of a neighbour is produced. With this in her arms she enters the bridegroom's house. There is no further ceremony.

If, as a wife, she misconducts herself she is sent back to her parents, who refund her price in cattle.

A woman with child is dieted. The child is named by the mother four days after birth. If a boy, he retains this name until his return from his first war-path, when his name is changed. If milk teeth first appear on the left side, it is a bad omen, and the child is not suckled, but fed on goat's milk. The child is weaned after three months.

The dead are carried into the bush. Even the body of a chief is left unburied, but an ox is slaughtered by the body, and the flesh of the ox may not be eaten by any one.

The Suk, like the Nandi, appear to be capable of acting in bodies in war, and select two fighting chiefs. There are no elaborate preparations before starting on the war-path, although the warriors are supposed to eat as much meat as possible before taking the field. Ostrich feathers in their hair are a sign that they are on the war-path.

Their arrangements for dividing the spoil would also appear primitive. The two chiefs take their share and the balance is divided anyhow. In the adjustment of the inevitable disputes that arise, the use of spears is not allowed, but sticks and knobkerries may be employed.

If one Suk in peace time kill another, he is fined all his cattle, but is not put to death; if he only maims he has to pay ten cattle. Thieves are punished by being beaten with sticks.

Disputants generally exchange spears as a sort of oath that they will abide by the settlement arrived at.

*Arts and Manufactures.*—Skins are cured, but not made into leather. A rude kind of earthenware is made. Millet is grown and the fields are often irrigated by small channels.

Tobacco is grown, and used as snuff. A fermented liquor is made from millet, and largely consumed. Iron is worked.

*Personal Ornaments, Disfigurements, etc.*—Some of the men are marked with patterns in raised cicatrices on the chest. The two central lower incisors are removed. Ear-rings of wire are worn by the men in the lobule, and a few also wear a ring in the septum of the nose. The lower lip is always perforated in the male sex; in this perforation is worn a pendant wire ornament from 4 to 6 inches in length. The hair of the men is commonly plastered with mud on the top of the head, and ornamented with feathers. Men of importance wear the long hair bag (*shoolip*) of the Karamojo. In either case a piece of wire is inserted into the hair posteriorly, and curved forward over the top of the head. The women wear their hair in the natural state. The men are generally naked except for the skin of a goat or monkey depending down the back. The women wear two or three goat skins fastened round the waist. Circumcision is not practised.

Their weapons are spears, shields, bows and arrows. The spears are used either for throwing or stabbing. The blades are small, and of a bay leaf shape; the butt end is protected by a small sharpened pommel and the edge of the blade is protected, when not in use, by a rim of hide.

The shields are of wicker-work, and are oblong in shape, averaging about 3 feet in length, and 9 inches in breadth. The bows are well made, and the arrows have generally detachable thin wooden points which are poisoned and break off in the wound. A curved finger knife projecting, like a claw, from the finger ring, is also sometimes worn.

The members of the Bantu and Negro groups have been so fully described by others that it is unnecessary to deal with them in detail here, and I will conclude this paper with a few notes on the history of the tribes as gathered from their own legends and traditions.

(c.) NOTES ON THE HISTORY OF CERTAIN TRIBES AS REGARDS THEIR PRESENT AND PAST GEOGRAPHICAL DISTRIBUTION.

This is a somewhat difficult matter as the data with which we have to work are very meagre, and it is not improbable that some of the deductions to which I have come may be challenged or modified by others. But in dealing with such primitive peoples, it is very difficult to obtain any traditions as to their origin or migration, and I shall confine myself to the expansion, contraction and movements of the tribes concerned within the area considered, and leave the larger question of their actual origin to experts.

Dealing first with the Eloegop, we find a tradition that they came from the country east of Lake Rudolf. Extending southward they conquered the whole of the grass lands adjacent to the meridional rift, enslaved the Anderobo there, occupied the plateau of Lykipia and nearly exterminated the "Senguer," who dwelt on the Guash Ngishu plateau.

As "l" and "r" are interchangeable "Senguer" of the Juba expedition is evidently the same word as "Jangwel," a term which Mr. C. Hobley found was applied by the Nandi to designate their tribe. Still spreading onward the Eloegop occupied the grass lands far to the south, as far as, or even beyond, Mount Kilimanjaro. They then divided into three tribes, similar in language and customs, but with a certain internal jealousy gradually growing into open war. The Sambur retained the country east of Lake Rudolf, the plateau of Lykipia and the meridional rift as far south as Baringt. The Guash Ngishu branch occupied the equatorial portion of the meridional rift and the grass plateaux on the Guash Ngishu and Mau; the Masai extended from Naivasha to Kilimanjaro. Civil war broke out between the Masai and Guash Ngishu who were helped by their kinsmen of Lykipia. After some initial defeats, the Masai detached the Sambur of Lykipia from the hostile alliance and then crushed the Guash Ngishu so utterly that the latter could no longer hold their own against the dispossessed Nandi and their kindred, and ceased to exist as a tribe. They are now scattered dwellers in Nandi, Kavirondo or Ketosh.

The Sambur weakened by the civil war were attacked by the Suk who lived on the southern portion of the Karamojo plateau, and were being expelled from their country by an advancing Karamojo wave. Under the pressure of the Karamojo the Suk migrated west and conquered from the enfeebled Sambur that portion of the meridional rift north of Lake Baringo, thus practically cutting off the Sambur of Njemps from those of Lake Rudolf. The latter had apparently to deal with the growing power of the Rendile, who show close affinities in language and customs with the Somali, and the isolated Sambur of Njemps were shorn of their power under the attacks of two small villages near the south of Lake Baringo. The Sambur of Lykipia, weakened by war and isolation and impoverished by cattle plague, were in turn subject to attacks by the Rendile, and are now almost, if not quite, destroyed. Thus the once great dominion of the Eloegop is now represented by the southern branch, the Masai, and these, who suffered very much by their civil wars, the cattle plague and from small-pox, are perceptibly weakening in power, and signs are not wanting that a further split is in course of formation between the northern and southern Masai which will still further weaken this once powerful and much dreaded tribe.

In this sketch of the Eloegop, based on their own traditions, I have not referred to Latuka, as I could gather nothing to show any trace of the migration which separated these peoples, although their common origin would appear to be beyond a doubt.

But in tracing the migration, southward, of the Eloegop, their great dominion



and their gradual decay, we have incidentally arrived at certain evidence as to the relative antiquity within the geographical area considered, of certain other tribes. The Anderobo, Nandi and Suk must have been anterior to the advent of the Eloegop, while the Karamojo migration southward would appear of more recent date.

Passing on to the Suk-Nandi group, we find that they comprise amongst their members the Anderobo, and the Nandi (Sanguer or Jangwel) who were admittedly prior to the Eloegop, and also find that this group of tribes embraces many others who are now for the most part dwellers in the mountainous and forest regions in this part of Africa. These tribes, often small and insignificant in themselves, would appear to be broken fragments of a powerful and widespreading people who occupied an extensive tract prior to the advent of the Eloegop, Karamojo and Bantu conquerors.

It is also interesting to note that this group of tribes shows more connection in language with the Ogaden Somalis than do the tribes which now occupy the great expanse of intervening country. This is still more remarkable when we bear in mind that the northern Somalis rather look down on the Ogadens as having been more contaminated by mixture of blood with the aboriginal inhabitants.

The greater antiquity of the Suk-Nandi group as compared with the Eloegop is clear, and the Suk traditions, that they were dispossessed by the advance of the Karamojo, subsequent to the migration of the Masai, would appear evidence that the Karamojo wave is of still more recent date. There is also confirmation of the Suk claim to have formerly occupied the south of the Karamojo plateau, in the fact that the inhabitants of the Chemorongi mountains, which run as a wedge into the Karamojo and Turkana country, are Suk, and that small completely isolated colonies of Suk still dwell on the lofty mountains of Dehasien, Moroto and Kamalinga, in South Karamojo. The people of Save, who belong to the Suk-Nandi group, also say that they formerly occupied the plains north and east of Elgon until dispossessed by the Eloegop and Karamojo. The southward movement of the Karamojo would appear to have been at a much later date than that of the Eloegop, although the connection of their language and customs point to a common origin. The Karamojo themselves appear unknown to the Masai, but their kindred the Turkana are called the Elgumi.

The Karamojo, Turkana and Donyiro are branches of one tribe, of the same blood, language and customs, who have gradually moved southward and westward. The Elgumi west of Mount Elgon appear to be an offshoot of the Karamojo, and it is interesting to find that Mr. Hobley has discovered that only some 50-60 years ago these Elgumi threw off a colony which intruded into the Bantu people of Kavirondo and formed a settlement at Kikelelwa. This, coupled with the southern advance within the same period of the Karamojo on the east of Mount Elgon, would appear to show that the vitality of this great and warlike tribe is not yet exhausted. The Karamojo would also appear to have reached the Victoria Nile,

but the so-called Wakedi there are not pure Karamojo. It is more likely that while the Karamojo have conquered widely it is only on suitable country like the open grass plains that they retain their full characteristics, and in an unsuitable locality, they deteriorate through admixture with the conquered tribes better adapted than themselves to the local climatic conditions.

So far there has been little difficulty in establishing the opinion that the Suk-Nandi were prior to the Eloegop and the latter to the Karamojo, but in ascertaining the comparative antiquity of the Bantu and Negro tribes there is much less to go on. The Bantu people of North Kavirondo, however, state that they came from the south, while the people of Masawa (and Ketosh) are said to have migrated by way of Usoga. The fact that the former are mainly growers of grain and potatoes, while the Masawa people resemble the Wasoga and Waganda in largely cultivating bananas, would appear to support this tradition. The Nyifa or South Kavirondo, a tribe allied to the Negro Shuli, have no tradition as to their origin, and no knowledge of their cousins in the north. This fact might be taken to indicate that their presence in Kavirondo is prior to the Bantu. The Bantu Kavirondo have moreover secured the best part of the country, viz., that with two rainy seasons, while the Negro Kavirondo are confined to that portion with only one rainy season. This would all point to the Bantu Kavirondo being the more recent conquerors in the country. I am also led to believe that the Negro Nyifa in Kavirondo are anterior to the Masawa, and that the Elgumi are of still more recent origin.

The Masawa people have always spoken of the latter as encroachers, if not interlopers, and the Kikelelwa incident shows a spreading tribe.

If the Negro Kavirondo reached their present position from Shuli country by the East of the Nile and Victoria, it would appear probable that they were isolated by the intervening country between Mount Elgon and the Nile being occupied by the Bantu, who were themselves more recently sub-divided by an intrusive wedge of Elgumi, who separated Masawa from Usoga.

It is interesting to note that the Wasoga, Waganda and Wanyoro know the Elgumi and Lango as Bakedi, or the naked people, while the equally naked Shuli are called by a distinctive name Bagani, and the Kavirondo are called Bakavirondo. Now it is hardly likely that the epithet "naked people" would be applied to a neighbouring tribe unless those who applied the term had some clothing themselves, and there is reason to believe that the Bantu peoples in the Victoria region have gradually developed a taste for clothing and were originally as naked as any one else there. The Waganda admit to the Bakedi raiding across the Nile, and to many more or less unsuccessful counter raids, but I have never heard them claim to have dispossessed the Bakedi of territory. On the other hand the fact that the Shuli have a specific name Bagani applied to them, not unlike the Bantu word for aliens, would show that the Bantu people knew them as a distinct tribe, and would tend to indicate that the Bakedi appeared later in the field. More reliable data as to this point should, however, be procured in Uganda, and doubtless



will be forthcoming, if others will, like Mr. C. Hobley, take an interest in such investigations. But as matters stand, I would favour the theory that the Negroes preceded the Bantu, and the Bantu preceded the Elgumi, Lango and Karamojo. Thus if we consider the more limited area in which there mingle representatives of the Negro, Bantu, Suk-Nandi, Masai and Karamojo, I am led to conclude that the Karamojo are the most recent arrivals. Before them was a wave of Bantu sweeping northwards and of Masai (Eloegop) sweeping southwards dispossessing and encroaching on the older inhabitants represented by the Negroes and Suk-Nandi families. Whether the Bantu or Eloegop were earlier in the field is uncertain, but it is noteworthy that the Masai were known to the Waganda, who had a prophecy, strangely brought to pass by the British occupation of Uganda, that their country would be conquered through Masailand. The relative antiquity of the Negro tribes and the Suk-Nandi in their present geographical position is uncertain, and there is nothing on which to base an opinion, but on this point, too, further research may throw some light.

The whole question is a difficult one, but some of my conclusions appear to rest on a fairly solid foundation. In other cases, there may not be sufficient grounds to establish my theory, but as I have given my reasoning I trust that, even should the conclusions be afterwards proved inaccurate, in certain details, the work of my recent expedition has at all events thrown a little additional light on the most interesting problem of the ethnology of these regions.

#### DISCUSSION.

Mr. CROOKE remarked that for him this paper possessed special interest because in it a mass of materials was collected which would be of value in considering the Negrito element in the Indian population, which probably reached the Peninsula from the opposite Continent of Africa. Some of the customs described by Lt.-Col. Macdonald were from this point of view of special interest. Thus, the wearing by the bridegroom of his bride's petticoat for some time after marriage suggested similar customs of sex disguise in India, of which various explanations might be formulated. The Masai custom of bush burial in the case of lower class people might be compared with similar Indian burial rites as described in a paper contributed by him to the present number of the *Journal*. The question of female circumcision among the Somalis was discussed by Major J. S. King, in Vol. II, *Journal Anthropological Society of Bombay*. So far it does not appear to have been traced in India. The blood covenant oath of the Karamojos is an interesting parallel to similar Arabian rites, as described by Dr. Robertson Smith. The Suks appear to have a well-developed custom of bride capture. The bride takes a child in her arms probably as a fertility charm.

Mr. SHRUBSALL pointed out the manner in which the lantern slides just exhibited illustrated the probable physical as opposed to the linguistic or social unity of the negro races of Africa, drawing attention to certain features of resemblance between the natives of the country to the north-east of the great lakes, and those depicted on the Benin castings now at the British Museum.

## CENTRAL AFRICAN

COLLECTED BY LIEUT.-COLONEL J. R. L. MACDONALD

English.	Swahili.	Usoga.	N. Kavirondo.	Masai.	Latuka.	Karamoja.	
Salutation	jambo...	godeo	merembe	sota	komo	māta	1
Water	maji	maji	amaji	ngare	ngārei	akipi	2
Food	chakula	emēre	usuma	nda	angiria	akimuj	3
Village	mji	charo	litara	ngang	tivangole	lore; nawi	4
Man	mtu	mundu	mundu	waltoñani	oiye	tonoñan	5
Woman	mke	mkazi	mukasi	ngatok	nanogote	abero	6
Child	mtoto	mwana	mwana	ngerei	aduri	koko	7
Day	siku	lunako	musiro	ngalon	ngalono	agulon	8
Road	njia	ngira	ngira	ngoitoi	neko	aroto	9
Cloth	nguo	lugue	lisēro	ananga	abongo	alao	10
Smoke	moshi	mosi	mos	mburua	aburo	apuru	11
Millet	mtama	bugemba	mabēle	olmusha <sup>1</sup>	nema	muma	12
Plantation	shamba	musire	makunda	elmgunda	elwaji	amana	13
Cattle	ng'ombe	ente	ngombe	{ ngeteng } { ngishu }	neteng	{ ate } { aituk }	14
Cow	ng'ombe jike	entemugongo	ngmukasi	ngeteleboni	angote	aituk aberu	15
Bull	ng'ombe ndume	enteenume	ngyeuno	olegeteng	atamut	aituk manek	16
Goat	mbuzi	mbusi	mbusi	{ agine } { udare }	ēni	agine	17
Sheep	kondoo	entama	ligondi	enger	aker	mēthek	18
Donkey	punda	endogoi	isigiri	usigria	asigiria	vigria	19
Camel	ngamia	—	ngamia	undames	akonikoni	ungala	20
Waterhole	—	ensulo	buina	laroto	agiri	locho	21
River	mto	kivari	musalo	guas	nalore	nangololo	22
Rain	mvua	amadi	ifula	ngai	agede	akiro	23
Trees	miti	moti	musara	ingata	abēre	akitoia	24
Grass	nyasi	esubi	munyasi	elgujita	nēbo	nginya	25
Earth	udongo	etaka	liroba	ngulukok	aboro	alup	26
Sleep	lala	kutenduka	kukoma	eraga	ejoto	apēre	27
Milk	maziwa	mata	mabere	kule	nali	akile	28
Spear	mkuke	eifuma	lifumo	aremet	nelu	agwara	29
Shield	ng'ao	ngabo	ngabo	eloñgo	akāli	aupāl	30
War	vita	eige	khweruna	njore	toriūm	ngijore	31
Peace	amani	turiembwa	khwerunatawe	sutwa	obing	athilio	32
Meat	nyama	mamba	inama	{ nigiringo } { ngiri }	aringo	agiring	33
Game	—	visoro	isolo	muvesi	nalōre	eliañgi	34
Head	kichwa	mutwe	murue	lugunya	nāgho	akao	35
Hand	mkono	mkono	sinama	angaina	nāni	akāni	36
Foot	mguu	maguru	sirenje	angeju	neju	akeju	37
Brother	ndugu	mgandawange	mwanaufu	olalashe	ilung	lokatokan	38
Son	mtoto	mukewange	mushaniwefu	leion	unyigo	lapat	39
Dog	mbwa	mbwa	mbwa	lodia	ingok	ngoko	40
Lion	simba	mpoligoma	yatunyi	olongatūm	achiung	angatum	41
Snake	nyoka	musota	njoka	olosorei	amuno	emoni	42
Iron wire	sengenge	ungwiri	lunālo	sengenge	abilata	athoat	43
Brass wire	masango	rikomo	mukasa	masang	akwen	maritoet	44
Beads	ushanga	bunere	fuma	saien	ouozo	chulo	45
Fire	moto	muriro	muriro	ngēmā	nēma	—	46
Father	baba	latawange	baba	papa	munya	baba	47
Where	wapi	gha	rohena	kore	nkēro	yeyai	48
How many	wangapi	wameka	talibanga	kajakulo	mkāja	nyai	49
What	nini	niki	shina	ainyo	nenyi	nyo	50

<sup>1</sup> Kikuyu word.

## VOCABULARIES.

## IN THE COURSE OF THE JUBA EXPEDITION.

	<i>Suk.</i>	<i>Nandi.</i>	<i>Wanderobo.</i>	<i>Save.</i>	<i>S. Kavirondo Wanyifa.</i>	<i>Borana Galla.</i>	<i>Ogaden Somali.</i>
1	chamkecha	chamke	sobei	sobei	mosi	{ nagaya kabila. }	{ mot. manwadba. }
2	pau	pék	pék	piko	pi	bishan	biā.
3	ama	amit	amit	ngumia	kōni	sagāle	sōrta.
4	ngokatanyo	keita	kaita	kota	pācho	karang	hārāda.
5	akogo	pik	kiito	morān	thano	sifeda	ādēga.
6	korkoni	korke	korko	koroko	thako	intala	nākta.
7	mōnū	lakwe	lagwe	lekwa	nyathi	jōle	elmā.
8	akogo	petunok	āeng	sisita	ndal	guyan	āwa.
9	ore	orana	ōre	areti	wangio	tirbū	wadada.
10	alao	ange	ange	kirengēt	lao	wāya	marada.
11	āros	iyet	aros	ingitim	iro	ār	kēka.
12	mosong	mosangik	mosong	musongek	bēl	machabo	harurk.
13	matei	pék	pék	imperet	puotho	ōru	bērta.
14	taifige	tōgha	tōka	teta	viang	lawōni	lōta.
15	sakāt	iwoge	sakāt	teta koroko	viangmathako	kōrāmsa	sadidik.
16	yei	aito	ēto	teta moran	ruath	kibich	dibika.
17	ngoror	nioko	arte	warēk	dieli	khreē	arega.
18	kēsh	kicherek	kēchē	mangit	rombo	khōlā	eda.
19	sigria	sigire	sigria	sigria	kanyema	ārē	tomēra.
20	tāmās	tamesi	tembes	tembes	aluo	gāl	gel.
21	pau	kererkie	luge	pikopañoi	awachi	kōno	lechan.
22	en	endo	ēn	eitom	āora	endata	durdurka.
23	rōp	torōt	rōpta	ropta	koth	bōkē	rōp.
24	kuendo	ketit	ketit	katet	yath	mūku	huiyet.
25	susōm	susuandi	susuon	suswek	lum	būyo	āusk.
26	numoi	numunyek	nongum	kitopañoi	lō	biye	āro.
27	rūē	kaguruiyo	mauru	ruondo	anēndo	rāfi	sāhao.
28	keko	kiyeko	keiko	kiko	chaki	ānān	āna.
29	ngōt	āngotet	ngotit	akwar	tong	warān	warākā.
30	longē	long	longe	louget	kuot	wantē	kāshān.
31	lūk	lūke	setluge	parare	lueni	nyābiadufe	tērefta.
32	mis	tiliye	tilia	kutai	merembe	nagējira	nabāt.
33	pēng	penda	pānyek	pendo	ringo	fōn	hīlip.
34	arawa	arawe	arāwe	makao	lē	—	—
35	mēt	metit	metit	metit	wich	matā	madaha.
36	ēyi	ēyu	ēū	—	luedo	hārākā	kānta.
37	kēl	keldo	kēlto	kirengēt	tielo	lūkū	lughā.
38	wurtanyo	keturche	ēlto	tiliangani	wadwa	ōbōles	wālala.
39	nyēta	nyētik	lakwe	kwero	omēra	mūchā	arorta.
40	kugwi	sēsē	chugui	ngoniti	guōk	sāve	ēg.
41	kawai	abiye	kiesing	—	siburi	nēk	libēha.
42	moroi	ērēn	ērēn	njoki	tuōl	bāfu	māsk.
43	titir	tobokwe	tobokwe	sengenge	malo	—	—
44	tai	tāe	tai	{ sengenge amulum }	mola	—	mārta.
45	sonei	soneiet	sonoi	sonaia	utiti	—	kosha.
46	māt	māstinock	māt	—	māch	ibitā	tābka.
47	paponyan	paipai	pabwa	—	urwa	abaki	abahi.
48	ngō	ngiro	ano	miono	akānye	kulote	āwē.
49	adeng	ata	ata	ata	adi	nagām	wamisa.
50	kenya	kelene	ne	ne	ango	wansūm	wamhei.

## CENTRAL AFRICAN

English.	Swahili.	Usoga.	N. Kavirondo.	Masai.	Latuka.	Karamoja.	
To-day	leo	lero	sitere	tata	aghāna	takāi	51
Yesterday	jana	ido	shavere	ngole	ngolonole	beali	52
In front	mbele	mberi	mbiri	lugunya	agosiere	kingaren	53
Behind	nyuma	enuma	munuma	kurum	negalo	kao	54
To-morrow	kesho	enjo	machuri	teiseri	moite	moi	55
No	hakuna	ira	shishirio	mēti	abeng	mām	56
All	wote	vuona	vos	poege	ingiye	dādang	57
After	baada	linda	basiri	ngor	idigido	togwa	58
Now	sasa	begano	bulano	tata	teniaghani	tete	59
Here	hapa	ghano	ano	ene	teni	nege	60
There	huko	cyo	eria	idyē	dia	ama	61
Near	karibu	gambi	nahanabi	tana	egutu	api	62
Far	mbali	aghala	nehale	alagwa	alamaja	alwana	63
Who	nani	nani	wina	engai	ngaiye	ngai	64
Whose	ya nani	chani	shawina	kenengai	anangai	kangai	65
My	yangu	yange	yanje	enai	ununa	kang	66
Your	yako	iyō	iyiyo	line	onungana	koni	67
His	yake	chono	nasisis	lanye	onalia	kalu	68
Bring	leta	leta	lera	eao	eau	yao	69
Come	njoo	ēda	inza	wao	uwang	bwa	70
Want	taka	nenda	ninyere	aiyao	yatakitaniye	achamet	71
Go	nenda	genda	kenda	shomo <sup>1</sup>	ilo	toloto	72
Will reach	tafika	tunatoka	kuola	tabeiye	abanya	abun	73
Wait	ngoja	rinda	rinda	tanyo	ētilanani	dareo	74
Tell	ambia	nkobera	songiri	tolimu	ekiana	tolomokin	75
He is coming	anakuja	aia	aredza	alotu	atuade	aloto	76
He is going	anakwenda	agenze	akendire	alle	ilo	alothi	77
Call	mwite	mwete	mulange	mboto	nitik	tanyara	78
Do you know	wajua	indidi	manyire	ayolo	mejakenē	iyen	79
Finished	mekwisha	bamaze	bauēre	edibe	atukoi	armure	80
Take away	chukua	situra	kinga	ēwa	ebiam	toting	81
Speak	sema	yogera	simga	eroro	ekiana	tolomokin	82
Drink	kunywa	kunya	ama	aitangik	amata	amathe	83
Eat	kula	kuria	dia	enāsa	ingiye	anāmi	84
To fight	ku pigana	burwana	kukweana	matarata	toriamu	iyare	85
Make	fanya	kola	khola	enderoni	egani	—	86
Dear	ghali	kikalanguf	kitinyere	agu	omutari	agugum	87
Cheap	rahisi	vioru	bulai	kelelak	niūāia	agilejok	88
Fast	upesii	mangumangu	chia	tasiugu	kokwak	tomatim	89
Slow	polepole	mpola	kala	aketiaketi	mimo	aditadit	90
Unripe	bichi	kibisi	kivisi	keshala	obuji	ajonok	91
Good	mzuri	murungi	mulai	sederi	yoghoma	ajokan	92
Bad	mbaya	mubi	momyubi	torono	orogho	orono	93
Red	mwekundu	mweru	mulaf	nanyuki	odoiret	narengan	94
White	mweupi	lueru	ndaf	neibor	olobong	nakwañan	95
Black	mweusi	mwidugavu	nimumari	narok	lamole	—	96
Blue	kama maji ya bahari.	luyuvu	nimumari	naivasha	losura	nakirionon	97
Brave	hodari	mukalangufa	muting	chogul	ogol	—	98
One	moja	mulola	mulala	nabo	aboite	apei	99
Two	mbili	babili	mabili	are	arega	nyare	100
Three	tatu	basatu	mataro	uii	kunugoe	nyaini	101
Four	nne	bana	bane	oñon	ongwan	nyomon	102
Five	tano	batano	barano	miet	miet	akan	103
Six	sita	mkaga	basaba	ile	ile	akaukapei	104
Seven	saba	musamya	baranonababili	nabishyana	ghatañak	akankare	105
Eight	nane	munana	banana	ishiete	kotoguni	akankaune	106
Nine	tissa	muenda	barananabane	naüdo	ko'ongon	akankaomon	107
Ten	kumi	ikumi	kekume	tomon	tomon	tomon	108

<sup>1</sup> verb alle.



VOCABULARIES—continued.

	<i>Suk.</i>	<i>Nandi.</i>	<i>Wanderobo.</i>	<i>Sare.</i>	<i>S. Kavirondo Wanyifa.</i>	<i>Borana Galla.</i>	<i>Ogaden Somali.</i>
51	iyē ...	nauoni ...	ngolēl ...	laut ...	tinende ...	bōru ...	māngta.
52	oio ...	amut ...	omut ...	amtum ...	nyoro ...	bōrtirām ? ...	shali.
53	tai ...	tai ...	huimet ...	—	atelo ...	dābāri ...	hōrei.
54	let ...	letut ...	lēt ...	siskina ...	kiēn ...	jēbe ...	tibonoko.
55	oinopet ...	karon ...	ārōl ...	tuni ...	king ...	bortirōm ? ...	biri.
56	maminye ...	matinye ...	momi ...	purio ...	onge ...	imbeku ...	māakān.
57	tukul ...	tokol ...	togul ...	tukul ...	lundo ...	wasuntutu ...	kulugei.
58	mulēgit ...	toma ...	marobon ...	tombo ...	podī ...	endufine ...	wali.
59	ive ...	raune ...	ongolen ...	rāūt ...	kauon ...	wānsun ...	ata.
60	iyēte ...	yū ...	iyu ...	ule ...	karkai ...	ārma ...	mēchān.
61	yuno ...	olim ...	iyun ...	inyi ...	kucha ...	kulothi ...	hāgo.
62	lēgit ...	lēgit ...	lēgit ...	—	machegine ...	tai ...	sedo.
63	lōwet ...	lo ...	lō ? ...	—	mabori ...	bāyā ...	hagafukta.
64	ilat ? ...	tōrot ...	ichingo ...	āgo ...	ngawa ...	wānsun ...	waiyo.
65	ongōnyete ...	pongoki ...	pongo ...	pango ...	maruga ? ...	kaunuti ...	āyale.
66	nenyān ...	nanye ...	nenyune ...	nañwane ...	māra ...	kānkiya ...	anale.
67	ñaūgu ...	nangun ...	nangun ...	nyanuni ...	māri ...	kanketi ...	sagale.
68	pauēri ...	mananyo ...	roni ...	nyangun ...	marejalicha ...	kahebelutie ...	nikasale.
69	ubune ...	konu ...	obun ...	suturi ...	kēl ...	kotim ...	kēn.
70	nyōna ...	abwa ...	ño ...	kujoli ...	abi ...	koi ...	kāle.
71	amachan ...	amache ...	amache ...	kucham ...	adwaro ...	malefet ...	wandoni.
72	kepecha ...	ūi ...	kēbe ...	kepichike ...	wathio ...	ējem ...	sāu.
73	nyōna ...	keitete ...	kaitete ...	kuo ...	atundu ...	bōrō ...	wāgari.
74	kanya ...	kanyet ...	kanya ...	sis ...	rit ...	ēch ...	juk.
75	mauūne ...	maun ...	mōkin ...	kungala ...	wachima ...	bobifeda ...	ūshek.
76	angun ...	añho ...	maño ...	kajong ...	abēru ...	adufi ...	wāemon.
77	kēpē ...	kui ...	kāoē ...	kuo ...	othio ...	nidiemi ...	nāwāge.
78	kūrē ...	kur ...	kur ...	nalalakujo ...	aluango ...	wām ...	ūyād.
79	angitōm ...	oūgin ...	onget ...	kalim ...	engeyo ...	nimbeka ...	wāakān.
80	akorok ...	karok ...	kakorok ...	katek ...	urumo ...	injirtu ...	doxabi.
81	kēnya ...	ūp ...	up ...	nām ...	ting ...	fūdādu ...	kāt.
82	anāna ...	ngatān ...	moun ...	ngolal ...	wācho ...	dubadu ...	adāl.
83	añchongim ...	aupiek ...	ūpi ...	pick ...	amatho ...	bishanduki ...	ap.
84	ama ...	ongēm ...	ām ...	wām ...	achamo ...	nyādū ...	sōrtōam.
85	epēsien ...	ngebarke ...	keporien ...	kubwar ...	wakedo ...	walola ...	walirhai.
86	yeiya ...	sāghan ...	ēai ...	—	tem ...	kāpi ...	same.
87	āū ...	ōi ...	āoi ...	burōkwalish ...	matek ...	—	ibadagiahe.
88	karan ...	kolokol ...	namayum ...	kwal ...	maber ...	wāndiko ...	wachabanyahe.
89	mongun ...	mongun ...	amai ...	kabehikucho ...	pispio ...	hūrisi ...	rāksō.
90	nyomōt ...	mutia ...	nyomutio ...	mūt mūt ...	mosmos ...	lānijem ...	ayāsō.
91	nyatel ...	tokonyale ...	nyalēl ...	tombo kin ar ...	manum ...	dēdi ...	akoiēnye.
92	karām ...	kararan ...	kararan ...	—	ma'er ...	tānsā ...	watalmonte.
93	ēya ...	sorin ...	ēa ...	—	marach ...	hāmā ...	wahunyei.
94	perir ...	periek ...	perir ...	—	masulwali ...	dīma ...	wasie.
95	lēl ...	lēlek ...	lēl ...	—	marachar ...	āti ...	wāadu.
96	toi ...	tuek ...	toi ...	—	lateng ...	kūrach ...	wamedoiye.
97	weiwei ...	arareita ...	sochige ...	—	lateng ...	gānālē ...	ākhtār.
98	āūl ...	koliōl ...	āoi ...	—	matek ...	jābā ...	hōgbuleiye.
99	akong ...	agenge ...	akenge ...	agenge ...	acheli ...	tāka ...	met.
100	adeng ...	aieng ...	aeng ...	aen ...	ario ...	lam ...	lāba.
101	somok ...	somok ...	samok ...	samok ...	adek ...	sādi ...	eadhe.
102	naoūgon ...	āūwan ...	oūwan ...	anwan ...	ongweni ...	afur ...	āfār.
103	ekān ...	mūt ...	mūt ...	muti ...	abich ...	shān ...	shān.
104	akankapei ...	ilo ...	lo ...	mutwakenge ...	auchiel ...	jā ...	lēh.
105	isāp ...	tisāp ...	tisup ...	mutwaien ...	atōro ...	torba ...	toḍāwā.
106	tine ...	sisit ...	sisek ...	mutwasomok ...	abereo ...	eadēt ...	sidit.
107	sokol ...	sokol ...	soghor ...	rutwan ...	luedoakachel ...	sāgūl ...	sāgāl.
108	nāman ...	tomon ...	āmūn ...	tomon ...	apar ...	kūdān ...	tomon.

NOTES ON THE MASAI SECTION OF LIEUT.-COLONEL MACDONALD'S  
VOCABULARY.

By MRS. S. L. HINDE.

English.	Masai.		English.	Masai.	
	Mrs. H.	Col. M.		Mrs. H.	Col. M.
Salutation ....	There are various forms of salutation in Masai. The salutation "soboi" is used between men when <i>not</i> shaking hands; the reply to this is "eber."		soba.	Ram ....	orrmerēgi ... —
Man ....	eltungani ....	waltoñani.	Ewe ....	ngērr....	—
Woman ....	engitok (form of address).	ngatok.	Donkey (masculine).	olāmwe ....	—
„ (female)	ngoirraion (this word is never used as a form of address unless insultingly).	—	„ (feminine)	ossigirria ....	usigria.
Child ....	ngerai ....	ngerei.	Camel ....	ndamess or ngaiurr.	undames.
Day ....	ngolong ....	ngalon.	River ....	ngwasso or orrgēju.	guaso.
Sun ....	ngōitri ....	ngoitōi.	God ....	ingai ...	ngai.
Road ....	engelā ....	—	Rain ....	elgieg....	ingata.
Cloth ....	enanga ....	ananga.	Trees ....	oldani	—
„ (warrior's war cloth.)	embūrruer ....	mburua.	„ (singular)...	engojeta ....	elgūjita.
Smoke ....	ngurrruma ....	—	Grass ....	ngop ....	ngulukok.
Plantation { (emogonda is the Kikuyu form). }	(emogonda is the Kikuyu form).	e'mgunda.	Earth (ground)...	erraga ....	eraga.
A head of cattle...	ngiting ....	ngeteng.	Sleep (imperative plural).	ngulē ....	kule.
Cattle (plural) ...	ngishu ....	ngishu.	Milk ....	eremet ....	aremet.
Cow ....	ngitelibong ....	ngeteleboni.	Spear ....	endiore ....	njore.
Bull ....	orlōingoni ....	olegeteng.	War ....	engerri ....	ngiri.
A goat ....	ndari ....	—	Meat ....	ingēringu ....	nigiringo.
Goat (he-) ....	orlōrro ....	agine.	Game (alive) ...	ngwess ....	muwesi.
„ (she-) ....	ingine ....	ndare.	Head ....	elogonya ....	lugunya.
A sheep ....	ngera ....	enger.	Hand ....	ndap ....	—
			Arm (the whole) ...	ngaina ....	angaina.
			Foot ....	ngaiju ....	angeju.
			Brother ....	ollalashe ....	olalashe.
			Boy ....	orlaiyon ....	—
			Son ....	there is no word for son; child is always used.	leion.
			Dog ....	orldia ....	lodia.
			Lion ....	ōlonātring ....	olongatum.

N.B.—In the Masai language there are different words for the males and females of domestic animals in distinction to those of wild animals, which have only one gender.



English.	Masai.		English.	Masai.	
	Mrs. H.	Col. M.		Mrs. H.	Col. M.
Snake ....	oloserai	olosorei.	He is going ....	kello nenyē	alle.
Iron wire ....	essegengi	sengenge.	Call (imp. sing.)....	emboōtu	mboto.
Beads ....	essain	saien.	Do you know ....	aiulu iye	ayolo.
Fire ....	ngima	ngēmā.	Finished ....	endebe	edibe.
Father ....	baba	papa.	Finish (imp. sing.)	edebe	—
To-day ....	taāda	tata.	Take away (imp. sing.)	endaū or	ēva.
Yesterday	ngole	ngole.		rodomo.	
In front ...	nologonya	lugunya.	Speak (imp. sing.)	atoju	croro.
Behind (last)	korom	kurum.	Drink ( " " )	toōgo or toōko	aitangik.
To-morrow	taaisere	teiseri.	Eat ( " " )	enossa	enāsa.
No ....	menenye	—	To fight ....	naarr or	matarata.
Not ....	} meti	mēti.		ngigerishu.	
None ....			Make (imp. sing.)	endobera	enderoni.
All ....	bōōgi	poege.	Dear ....	ergol	agu.
After ....	tengai	ngor.	Fast ....	tassiogi	tasingu.
Now ....	taāda	tata.	Slow ....	aketi	aketiaketi.
Here ....	enne	ene.	Good ....	sidaī	sederi.
There ....	iddie	idye.	Red ....	enyuki	nanyuki.
Near ....	eteana	tana.	White ....	eboir	neibor.
Far ....	elagua	alagwa.	Black ....	erok	arrok.
Who ....	enaiāna	engai.	Blue ....	engarramboi	
My ....	elai or enai	enai.		or ollonyori.	
Your ....	enino	line.		enabasha (or	naivasha.
His ....	enenye	lanye.		naicasha as	
Bring (imperative singular).	iaw	eao.		we call it),	
Come (imp. sing.)	woo or ōō	wao.		means "the	
Want (I want) ...	aiu	aiyao.		big water"	
Reach (imp. sing.)	tabaigya	tabeiye (fut. indic.)	Three ....	or "sea."	
			Four ....	ūni	uii.
Wait ( " " )	ndaishu	tanyo.	Five ....	ungwan	oñon.
Tell ( " " )	tiagi	—	Six ....	miet	miet.
Say ( " " )	tolimu	tolimu.	Seven ....	elle	ile.
He is coming ...	elotu nenyē	alotu.	Eight ....	nabishana	nabishyana.
				issiet	ishiete.

NOTES ON THE SWAHILI SECTION OF LIEUT.-COLONEL MAC-  
DONALD'S VOCABULARY.

By Miss M. E. WOODWARD.

SWAHILI and all Bantu languages divide their nouns into a number of classes, which are distinguished by their first syllable, and bring their adjectives, pronouns and verbs into relation with substantives by the use of corresponding changes in their first syllables.

English.	Swahili.		English.	Swahili.	
	Miss W.	Col. M.		Miss W.	Col. M.
Man (person) ....	<i>mtu</i> ....	<i>mtu.</i>	Reach, to ....	<i>kufika</i> ....	—
Male, n. ....	<i>mwaname</i> ....	—	He will reach ....	<i>atafika</i> ....	<i>tafika.</i>
Woman, female, n....	<i>mwanamke</i> ....	—	Call, to ....	<i>kwita</i> ..	} <i>mwite.</i>
" " adj. ....	<i>-ke</i> ....	—	Call him ....	<i>mwite</i> ....	
" " (of animals).	<i>jike</i> ....	—	Finish, to ...	<i>kuisha</i> ...	} <i>mekwisha</i> (finished).
Wife ....	<i>mke</i> ....	<i>mke.</i>	He has finished ....	<i>amekwisha</i> ....	
Water hole....	<i>tundu la maji</i> ....	—	Drink, to ....	<i>kunywa</i> ....	<i>kunywa.</i>
Game ....	<i>mawindo</i> ....	—	Make (imper.) ....	<i>fanya</i> ....	<i>fanya.</i>
Son ....	<i>mtoto mume</i> ....	<i>mtoto.</i>	Unripe ....	<i>-bichi</i> ....	<i>bichi.</i>
" (male child) ....	<i>mwana</i> ....	—	Unripe fruit ....	<i>matunda mabichi</i> ....	—
How many ?	<i>-ngapi ?</i> ....	<i>wangapi.</i>	Good ....	<i>-ema</i> ....	—
How many people ?	<i>watu wangapi ?</i> ....	—	" (fine)....	<i>-zuri</i> ....	<i>mzuri.</i>
All ....	<i>-ote</i> ....	<i>wote.</i>	A good person ....	<i>mtu mwema</i> ....	—
All people ....	<i>watu wote</i> ....	—	A beautiful person ....	<i>mtu mzuri</i> ....	—
Whose ....	<i>-a nani ?</i> ....	<i>ya nani.</i>	Bad ....	<i>-baya</i> ....	<i>mbaya.</i>
Whose house ?	<i>nyumba ya nani ?</i> ....	—	A bad person ....	<i>mtu mbaya</i> ....	—
My ....	<i>-a:gu</i> ....	<i>yangu.</i>	Red ....	<i>-ekundu</i> ....	<i>mwekundu.</i>
My house ....	<i>nyumba yangu</i> ....	—	A red house ....	<i>nyumba nyekundu</i> ....	—
Your ....	<i>-ako</i> ....	<i>yako.</i>	White ....	<i>-eupe</i> ....	<i>mweupi.</i>
Your trees ....	<i>miti yako</i> ....	—	A white child ....	<i>mtoto mweupe</i> ....	—
His ....	<i>-ake</i> ....	<i>yake.</i>	Black ....	<i>-eusi</i> ....	<i>mweusi.</i>
His house ....	<i>nyumba yake</i> ....	—	Black people ....	<i>watu weusi</i> ....	—
Come (imper.) ....	<i>njoo</i> ....	<i>njoo.</i>	Blue....	<i>kama maji ya bahari</i> (like sea-water).	<i>kama maji ya bahari.</i>
Come, to ....	<i>kuja</i> ....	—			

ORDINARY MEETING.

NOVEMBER 21ST, 1899.

Professor E. B. TYLOR, D.C.L., LL.D., F.R.S., *in the Chair*.

The Minutes of the last Meeting were read and signed.

The election of Mr. DAVID MACIVER as a Fellow of the Institute was announced.

The PRESIDENT introduced Dr. E. WESTERMARCK of Finland, who proceeded to read his paper:—"On the nature of the Arab Ġinn, illustrated by the present beliefs of the people of Morocco."

Discussion was carried on by Mr. WILLIAM CROOKE, Mr. G. L. GOMME, Mr. BOUVERIE PUSEY, and Mr. O. H. HOWARTH. After the exhibition of some lantern slides of Morocco, Professor TYLOR closed the proceedings with a vote of thanks to Dr. E. WESTERMARCK for a most useful and interesting paper.

The CHAIRMAN mentioned that the Third Edition of *Anthropological Notes and Queries* had just been issued.

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THE NATURE OF THE ARAB *ĠINN*, ILLUSTRATED BY THE  
PRESENT BELIEFS OF THE PEOPLE OF MOROCCO.

BY EDWARD WESTERMARCK, Ph.D., Lecturer on Sociology at the University of  
Finland, Helsingfors.

THE Arab *ġinn* hold a prominent place in the young Science of Religion in connection with a theory now much in vogue. They have been represented as survivals of ancient Semitic religion,—survivals which indicate that the Semites passed through a stage of totemism before they arrived at their conceptions of transcendental gods. This hypothesis, which has gained much adherence, seems to me to require reconsideration. Before proceeding to discuss the origin of the belief in *ġinn*, however, I shall give a detailed account of the belief itself, and this account I shall base upon the present superstitions of the people of Morocco among whom I have spent nearly a year, and to whom I shall soon return, with a view of examining the traces of Pre-Muhammedan belief still existing among them.<sup>1</sup>

The belief in *ġnân*<sup>2</sup> forms a very important part of the actual creed of the Muhammedan population of Morocco, Arab and Berber alike. It pervades all classes, and though some of the more enlightened Moors are inclined to represent it as a superstition of the ignorant, I doubt whether there is anyone who does not practically adhere to it. The common people speak of the *ġnân* as unreservedly as of men and women, and do not hesitate to claim a personal acquaintance with them. In consequence, it is comparatively easy to acquire an accurate knowledge of their belief.

The *ġnân* form a special race of beings, created before Adam. In various respects, however, they are like men. They eat and drink, they propagate their species, they are subject to death, and some of them, the Muhammedan *ġnân*, go to heaven after death. They even form sexual connections with men. In the village Ební Hlu, in the Anġera district, I was told that a villager once married a *ġinnīa*, or female *ġinn*. She gave birth to two sons, one of whom became a *ṭāleb*, or scribe, and is still alive. In a village near Tetuan, a similar case occurred. A man married a *ġinnīa*, and lived with her in a mill. When they were alone she had the appearance of a woman, but, as soon as anybody else entered the mill, she

<sup>1</sup> I have obtained valuable assistance from Sherif 'Abd s-Salām l-Baġālī, a resident of Tangier, who has accompanied me on all my journeys in Morocco.

<sup>2</sup> *Ġnân* (جنان) is the Moorish plural of *ġinn*, or *ġenn* (جن).

assumed the shape of a frog. The people knew of her from her doings. One morning her husband was found in his bed with his legs tied up. He had quarrelled with his wife, and she had taken her revenge in this way, whilst he was asleep. As a rule, however, she was kind to him. He had always money, he was well dressed, and possessed many guns,—which could only be accounted for by his having a *ġinnia* for his wife. This was, after all, an unusually happy instance, for connections with *ġnūn* generally result in madness.

*Ġnūn* may be met with anywhere, but certain places are especially haunted, *meskūnin* (مسكونين). At Tangier they have their favourite abode on the sea-shore; at Fez in an old fort; at Marrakesh their sultans assemble in the big well called *l-bîr l-ḥaddād*, at Tetuan in the spring *l-ḥnā l-kbîr*. They inhabit rivers, woods, the sea, ruins, houses, and particularly springs, and drains, and caves, and other underground places. Their native country is below the surface of the earth. There they have villages and towns, and live in tribes or nations, each of which has its sultan. But they are not tied down to any particular spot, and sometimes they travel great distances. They are constantly coming forth to the upper world, more especially when it is dark. Hence, a Moor's fear of the *ġnūn* practically commences with the twilight. There are streets in which he will not venture to walk at night, and houses which are uninhabited because nobody dares to sleep in them. In Marrakesh I heard of a man who moved out from his house regularly every night. Most Moors are afraid of sleeping alone in a room, especially if the door be left open, and to sleep in a stairway is regarded as particularly dangerous. It would require still greater courage to pay a nocturnal visit to a place where cattle are slaughtered, as the *ġnūn* have a special predilection for places where there is blood. As soon as it gets dark, too, a Moor will carefully abstain from pouring out hot water on the ground.

The *ġnūn* have no fixed forms, but may assume almost any shape they like. They appear now as men, and now as goats, cats, dogs, donkeys, tortoises, snakes, or other animals,—now as monsters with the body of a man and the legs of a donkey, now in other shapes,—sometimes, for instance, with seven heads. A man told me that once in his youth he met a little baby which suddenly changed into a giant. The monster, which was, of course, a *ġinn*, gave him a blow which made him lame for three years. One evening my servant, l-'Arbi, saw a *ġinn* in the offices attached to a mosque. The *ġinn* was white, had long hair, and was scratching its head. L-'Arbi, who was frightened, called the night-watch, and the *ġinn* then ran away in the shape of a red dog. L-'Arbi asserted that he was out of his mind for a month afterwards, and then a magician cured him by writing him a charm. In my house at Marrakesh my sleep was disturbed by the noise of a cat. When I told my servants to drive the creature away, they answered me that no Moor would ever dare to hit a cat in the dark, since it is very doubtful what sort of being it really is. It would be easy to fill a volume with *ġinn* stories from Morocco.

A *ġinn* often indicates its presence by producing something strange or



unexpected. The columns of sand or dust which often travel across the plains of Morocco are caused by *ġnūn*. In some places such a miniature cyclone is called *l-‘ammariā del-ġnūn* (العمرى دالجنون), “the bridal box of the *ġnūn*,” in other places, *‘airūd* (عيرود), this being the name of an *‘āfrit(s)*, or strong *ġinn*. *Ignis fatuus* is a fire kindled by *ġnūn*. A falling star is a dart thrown by the angels at a *ġinn* who tries to get up to heaven. The big stones in the walls of Mequinez were carried there by *ġnūn*, being too heavy for any man to lift. Dear times are caused by many *ġnūn* being in the town and eating up the food. When a man stumbles in the dark, some people say that he trod on a *ġinn*. The most usual way in which the *ġnūn* make their presence felt is by causing sudden disturbances of the health, such as convulsions, epileptic and paralytic fits, rheumatic and neuralgic pains, fits of madness, and certain epidemics which are rare and violent, like the cholera. In these cases the *ġinn* works its will by striking its victim, and by entering his body, or sometimes, in cases of epidemics, by shooting an arrow at him. When the cholera was in Morocco some years ago, the people believed that an army of *ġnūn* had overrun the country. Where the epidemic was very violent, the *ġnūn* were supposed to have pitched their tents inside the town wall, whereas the occurrence of a few cases only indicated that they were camping outside the town, and now and then making a hit with their poisoned arrows. I was told at Tetuan that those who died were followed to the grave by an unusually great number of people, and that for the following reason:—when a dead man was buried, the enemy at once looked out for another victim, and let his arrow fly among the crowd at the grave, and, therefore, the bigger the crowd, the less the individual risk. Jackson, in his account of the plague which raged in Morocco a century ago, also states that those who were attacked by the plague were supposed to have been shot by “genii” armed with arrows.<sup>1</sup> It should, however, be noticed that by no means all kinds of illnesses are attributed to the tricks of the *ġnūn*, but only sudden and unusual ones. Fever, typhoid, small-pox, etc., are sent by God; and there are many people who assert that all diseases are punishments inflicted upon mankind by God, and that the *ġnūn*, when attacking men, only do so by His command.

A man seized with sudden fear is peculiarly liable to the attacks of the *ġnūn*. If he then fall a victim to them he is said to have *shā‘ta* (شعط). If, for instance, anyone falls ill after being frightened by a cat or a dog in a dark place, the animal is held to have been a *ġinn*, and the man’s illness is explained by saying that the *ġinn* entered into him and gave him *shā‘ta*. Again, suppose a boy, whilst eating with his father, misbehaves in some way. If, when his father punishes him, he begins to weep, the *ġnūn*, which are always near people who are eating, easily seize him and give him *shā‘ta*. It is bad to awaken a man out of sleep too suddenly. He should be aroused slowly, as otherwise he may be frightened and get *shā‘ta*. It is also considered bad for a man to look at himself

Jackson, *An Account of the Empire of Morocco* (1814), pp. 176 sq. note,

in a looking-glass in the evening, and some people say that, if he does so, a *ġinn* goes into his eyes and makes them sore. There is held to be something mysterious about the reflected image in the glass.

There are good *ġnūn* and bad *ġnūn*, but the latter hold a much more prominent place in the popular creed. They are *shidātan* (شياطين) devils, and the worst of them is called Iblis, the devil, who is also termed *shītan*. The plural *ibālis* (إيبليس), however, is sometimes used for bad *ġnūn* generally. Iblis has seven hairs on his chin, and a bad scar over one of his eyes. He it is who incites men to fight. If a man is pugnacious, and his friends say, *allā jinnā'l sh-shītan* (الله يفعل الشيطان), i.e., "May God curse the devil," Iblis is frightened away, and the man at once becomes quiet. Iblis tempts brothers to have illicit intercourse with their sisters. When a man is about to give alms to the poor, Iblis restrains him. Iblis finds pleasure in seeing men do what is hateful to God. If anybody pollutes a mosque, or uses unclean liquid for his ablutions, or treats the Koran disrespectfully, he may be sure of gaining Iblis's favour. Iblis rejoices when a man dies unmarried, and weeps when a young man takes to himself a wife. He gives people bad dreams, and when a man yawns, he dirties his mouth.

The bad *ġnūn* being always ready to attack human beings, various means are used for keeping them at a distance. The *ġnūn* are afraid of salt and steel. Some Moors put salt in their pillows, or take salt in their hands when they go out at night, and if a man be frightened, it is advisable for him to eat salt. There are also people who put a knife near their pillow before they go to bed. A boy who was left alone in a house was attacked by *ġnūn*. They shut the door and blew out the light, but by rubbing a knife against the wall the boy succeeded in driving them out. The best, and, from a religious point of view, the correct preventive against the attacks of the *ġnūn* is the recital of passages of the Koran. A man who passes haunted places in the dark will feel safer if he repeat the *ājatu l-kursī*. When a man pours hot water on the ground, he generally says, *bism illā*, "In the name of God." The same words are uttered before every meal: he who neglects to say them will have *ġnūn* as table-companions. During the holy month of Ramaḍan the *ġnūn* are confined in prison until the twenty-seventh night of that month. They are especially afraid of everything connected with the religion of the Prophet, and, hence, they have a great respect for his descendants, the *shurfa*.

When the Moors build a house or dig a well, they always take precautions against *ġnūn*. The Anġera people put some salt and wheat and an egg in the ground, and kill a goat on the threshold of the new house; otherwise, they say, the children of the house would be stillborn or would soon die. In various parts of Morocco some animal—a goat, or a sheep, or a cock, sometimes a bullock—is killed both when the foundation of a house is laid, and when the house is ready, or nearly ready for occupation. In the latter case the sacrifice takes place on the threshold, and afterwards the slaughtered animal is eaten by the proprietor, his family, and invited guests. When a well is dug, a goat or a sheep is also killed, especially if

there be no signs of water. In Anġera I saw a well of which the lining brickwork was broken, and my native friends told me that it had cracked immediately after it had been built up, because no animal had been sacrificed to "the owners of the place." Every place has its *ġnūn*, its owners, *mwálin l-mkān* (مولين المكان). When travelling, the Moor asks for the protection of the spirits and the saints of the place in which he is going to pitch his tent. Every house, too, has its *ġinn*, good or bad. If the *ġinn* be good, the inhabitants will prosper; if bad, they will have misfortunes or soon die. When a Moor strikes a light in a dark room, he says, *msa-l-ħāir 'alikum jā mwálin l-mkān* (مسلىخير عليكم يا مولين المكان), "Good evening to you, oh ye owners of the place." The spirit of the house is frightened by dogs, by photographs, and by whistling.

When a *ġinn* has got hold of a man, various means are employed for driving him out. At Laraiche there is a spring near Sidi Boḡnādel's *ħamma* (الحمام), or offering-place, into which people possessed with *ġnūn* throw loaves of saltless bread. Some tortoises will probably appear and eat the bread, and the man who has thrown it in, after sprinkling his body with water from the spring, believes that he has got rid of his complaint. Someone who had tried the cure told me that he threw into the water two loaves, one cold and the other hot, because, as he said, his body was shivering with cold and burning with heat at the same time. I was informed at Marrakesh that a similar cure is practised near Glawi, in the Great Atlas. The patient throws a saltless loaf into the spring attached to Lalla Takerkut's sainthouse. Then he takes a bath in the spring, and the tortoises which eat the bread will rid him of the *ġnūn* by biting him. Related to this means of expelling *ġnūn* is the so-called *dīāfa* (الضياف), which is subject to many variations in detail. The following account shows one of the ways in which it is practised. A dish of fish or meat is prepared, without salt. Part of it, together with some saltless bread, is eaten by the patient, and another part is put on a plate and taken by a black woman to some place haunted by *ġnūn*. She also takes with her, in her basket, a piece of a looking-glass, a miniature flag in seven colours, some sort of clumsy doll, and a copper coin, together with some burning charcoal and incense. Besides the patient, the other members of his family may also partake of the dish, but, if they partake, they ought to salt what they eat. The woman who carries the basket must not speak to anybody she happens to meet, for otherwise the *ġnūn* may go into her. Generally some hungry dogs eat the food after the black woman has gone away. In Ební Hlu, again, the practice is to kill a cock, boil it, and to put its boiled flesh into a dish of *suksu*. The dish, when thus filled, is surmounted by the feathers of the dead cock, care being taken that none fall off. After the patient has tasted the dish, an old woman carries the rest to some spring which is haunted by *ġnūn*, and on the following morning, if the food has disappeared, the feathers are brought back to the house, and burnt, and the patient inhales the smoke. If, on the other hand, the food is left untouched, there is no hope of his recovery. I have also heard that, in some places, a cock is killed

over the sick man's head, without the orthodox ritual of turning it towards the East, and without any invocation of God. The cock, which should have the colour of the *ġinn* that is troubling the patient, is then carried to a place haunted by *ġnūn*. But this is called *l-ār* (العَر), not *d-dīafa*, which always involves the idea of a meal with *ġnūn* as guests. Two or three different ideas seem to underlie these practices. Not only have we the idea of a sacrifice, but we have, also, the idea of enticing the *ġinn* to leave the body of the patient, and, yet further, the idea of transferring the disease into some other body. The killing of the cock is a sacrifice, and the *dīafa*-meal has the character of a sacrificial meal. At the same time, there seems to be some hope that the *ġnūn*, being very greedy, will not be able to resist the temptation of the saltless delicacy. In the haunted place where the *dīafa*-food is deposited, they assume the shapes of the tortoises or dogs, which are seen to eat the food brought there in the patient's behalf. The idea of transference, again, is indicated by the biting of the patient by the tortoises, by the doll which is put in the basket together with the food, by the fact that the woman who carries the *dīafa*-food must not open her mouth, and by the belief, expressly held by some people, that the dogs which eat the *dīafa*-food are not *ġnūn*, but real dogs, and that, after eating, they will be possessed by the *ġnūn* that troubled the patient.

The *ġnūn* are divided into tribes, and each tribe has its special day for attacking human beings, as, also, its special colour. By ascertaining the day when a *ġinn* has entered a man, the magician can decide the colour of the *ġinn*, and can take his measures accordingly. The so-called Gnawa, who stand in an especially intimate relation to the *ġnūn*, and who are frequently called on to expel them from people who are ill, are said to dress both themselves and the patient in the colour of the *ġinn* that is believed to be the cause of the patient's illness, but this I have not seen for myself. All the seven colours of the rainbow are used for magical purposes when the tribes of all the days of the week are concerned, and, also, when, as sometimes happens, the particular tribe immediately concerned cannot be found out. But a good magician, I am told, does not make frequent use of the seven colours. The colour of an animal which is offered to the *ġnūn* generally is black.

The performance by means of which the Gnawa endeavour to expel the *ġnūn* is often very complicated, and may last for days. They sing and dance; walk round the patient, and make wry faces close to him; take him on their necks and carry him about, etc., etc. On Saturdays they eat dirt, because Saturday is the day of the Jewish *ġnūn*, which are fond of dirt. I saw some of these practices performed in Marrakesh, when one of my servants feigned sickness, and the *mġaddam*, or chief, of the Gnawa, together with an assistant, tried to cure him. I also called in a magician from Sūs. He pressed my servant's thumb, pinched his ear, and whispered into it passages from the Koran. He assured me that it was sometimes necessary to continue such whispered recitations for hours before the evil spirit would take flight. Passages of the Koran are also written upon a piece of paper,—which is often black, or coloured in accordance with the colour of



the *ġinn*, and the paper is then hung round the patient's neck or burnt before his nose. In the latter case it is the smoke from the burning paper that is supposed to expel the *ġinn*.

In cases of disease recourse is frequently had to beings who are sometimes called sultans, and sometimes saints of the *ġnân*. To this class belong Sidi Ĥammu and his son Sidi Ĥammûda, Sidi Mäimûn, Lalla Mäimûna, Lalla Mîra, Lalla Rķeja, Sidi Mûsa, Sidi Busäĥba, Shum Hârush and his son, *sultân l-kĥal*, Sidi Boknâdel, etc. All these have their *ĥammat(s)*, or offering places, which are often nothing more than big stones near or in the sea. Opinions vary, however, about the nature of these beings. Some of them are said by certain people to be ordinary human saints, and their master is Mulai 'Abd l-Kâder, the sultan of all the saints. To the *ġinn*-sultans offerings are made by patients or their families, to enlist their assistance in driving away the molesting *ġinn*. Very frequently cocks are carried to the *ĥammat(s)* of these saints, and are either slaughtered there, or left there alive. One morning at Tangier, I saw several women walk to a large stone in the sea, the *ĥamma* of Sidi Mûsa. They kissed the stone, placed on it some candles and incense, and had a bath on the other side of it.

A regular *ġinn*-cult is practised by the Gnawa, of whom we have already spoken. They are usually, but not always, blacks from the Sudan, and they form a regularly-constituted secret society. They live on more or less amicable terms with the *ġnân*, and, as I have already said, are experts in exorcism. The Gnawa celebrate an annual feast at which they make sacrifices to the *ġnân*. I was at Tetuan this year when the feast took place. The Gnawa went in procession, with noisy music, to a spring called '*ain s-sûwar*', near the Moorish cemetery outside the town. They took with them a black bullock, a black goat, and a black donkey carrying several chickens of various colours. When they came near the spring they danced, burnt incense, and lighted candles. The bullock was then killed, and the man who slaughtered it sucked blood from its throat. The other animals shared the same fate. Unfortunately I did not arrive at the spot until the proceedings were just over, but I am speaking from credible hearsay. When provisions are dear, the Gnawa go to the *ĥamma* of some *ġinn*-sultan,—Sidi Ĥammu being a special favourite,—or to the place where the *ġinn*-sultans generally reside.

The Gnawa pretend not only to expel *ġnân*, but, also, to attract them at their will. By inhaling the smoke of a certain incense and by dancing, they induce the *ġnân* to enter their bodies, and, when thus possessed, they are able to tell future events. I have twice been present at a *séance* in the Moorish fashion. The magician, a black man from Sûs, wrote some mystic signs on a sheet of paper which he fastened to the wall. Having thus written a letter to the spirits, he blew out the light, and demanded absolute silence. After a few minutes a tremendous noise was heard: the *ġinn* came down along the wall, and ran to the magician. A dialogue between the *ġinn* and the magician ensued, after which the *ġinn* went away over the roof. Nothing else could be seen in the dark but the vague outline of a moving body. The *ġinn* once shook hands with me, and the hand



was that of a man. The magician had no assistant. He was undoubtedly a good ventriloquist, and endowed with exceptional powers of seeing in the dark.

The *ǧnūn* are, generally speaking, lacking in individuality. Their characteristics are those of the species and of the tribe. Each tribe has not only its special colour, but also its special religion. There are Muhammedan, Jewish, Christian, and pagan *ǧnūn*. Moreover, the different tribes attack men under different conditions. According to a manuscript which was given to me by a magician belonging to the tribe Ební 'Arús, the Sunday *ǧnūn* will attack a man if he wash himself whilst perspiring; the Monday *ǧnūn*, if he walk on ashes at night; the Tuesday *ǧnūn*, if he walk on blood; the Wednesday *ǧnūn*, if he walk in a watery place; the Thursday *ǧnūn*, if he tread upon them in the dark; the Friday *ǧnūn*, if he walk in dirt; the Saturday *ǧnūn*, if he go out at night in a state of perspiration. At the same time, there are, as we have seen, among the *ǧnūn*, saints and sultans who, at any rate, possess proper names, and there is one *ǧinnia* who has a very distinct individuality, viz., 'Aisha Kādishā. She lives in rivers, or wells, or in the sea. She appears in various shapes, now as a child, now as a grown-up woman, with long hair and a beautiful face, but with the legs of a goat or an ass. She knows the name of every man, but when she calls anybody he should not answer her, for she is very dangerous. Not only does she kill men, she is, also, sometimes said to eat them. She will, however, disappear at once if a knife, or even a needle, be shown to her, for, like all *ǧnūn*, she is afraid of steel. She seems to be known everywhere in Morocco. The people of Tetuan say that she lives in the river, outside the town, at a place where there is a ruined bridge. She seizes and kills people who bathe there; and every year three or four men are said to fall victims to her in this way. In the summer, when it is very warm, she is sometimes seen sitting on the shore. At other places, she is said to dwell in the sea. A Moorish friend of mine tells me that, in his childhood, his mother used to warn him against 'Aisha Kādishā when he was going to bathe. She has a husband called Ḥammu Kāiu, who is not much spoken of. But in the neighbourhood of Mequinez a man told me that he had once seen him in a river.

The '*afārīt*, (عفريت) sing. '*āfrit* (عفريت)'<sup>1</sup> form a special class of *ǧnūn* remarkable for great strength and ferocity, and, consequently, much dreaded. The Moors also believe in the existence of beings named *ǧuāl* (الغوال) sing. *ǧól* (الغول), who have black faces and eyes like flaming fire, and are fond of human flesh. There are, however, no *ǧuāl* in Morocco. They live only in the Sudan, and in Morocco one hears of them chiefly from mothers who want to frighten their children. I have heard some people say that the *ǧuāl* are not *ǧnūn*, but form a species by themselves, whereas others are of opinion that they belong to the *ǧinn*-kind.

These are, so far as I have been able to ascertain, the main features of the belief in *ǧinn* as it exists among the people of Morocco at the present day. My

<sup>1</sup> In the North of Morocco pronounced '*afārītis* sing. '*āfrits*.

next object will be to show that this belief, in all its essentials, and in a great many of its details, is identical with that of the Eastern Arabs, and may be said, in the main, to represent part of the old Arab religion, in spite of the great mixture of race which has taken place on African soil.

It is related in histories that, in ancient times before the creation of man, a race of *ġinn* "inhabited the earth and covered it, the land and the sea, and the plains and the mountains."<sup>1</sup> Human or animal characteristics are universally attributed to them. Of the belief in marriages between men and female *ġinn*, there are instances recorded both in Arabic literature,<sup>2</sup> and in Doughty's description of his recent travels in the Arabian desert.<sup>3</sup> According to a tradition from the Prophet, the *ġinn* inhabit the land, the sea, and the air.<sup>4</sup> They are stated to live not only in uninhabited places, such as deserts, marshes, dense forests, and inaccessible mountains, but also in the dwellings of men.<sup>5</sup> In Mecca houses haunted by *ġinn* are said to be *meskūn*.<sup>6</sup> The modern Egyptians believe that the *ġinn* "inhabit rivers, ruined houses, wells, baths, ovens, and even the latrina."<sup>7</sup> But in the East, as well as in Morocco, their chief abode seems to be the under-world. In his *Travels in Arabia Deserta*, Doughty states, "They inhabit seven stages, which (as the seven heavens above) is the building of the under-world."<sup>8</sup> They are frequently supposed to be guardians of hidden treasures.<sup>9</sup> In Egypt, says Lane, it is a custom, "on pouring water, etc., on the ground, to exclaim or mutter, 'Destoor,'—that is, to ask the permission or crave the pardon of any ginnee that may chance to be there."<sup>10</sup> The fact that the chief abode of the *ġinn* is the under-world is, in fact, a corollary from the belief that they live in the dark and disappear at daybreak.<sup>11</sup> Everywhere the *ġinn* are feared chiefly in the dark. Thus, in Upper Egypt, according to Klunzinger, nobody ventures to live in a house alone, to go out alone late at night, or to remain alone in a room at night. According to the same authority it is not considered permissible to sweep out a house at night, because some *ġinn* might be struck and injured by the broom, and, for similar reasons, people do not care to have anything to do with cats, as these may be *ġinn* in disguise.<sup>12</sup>

In the East, as in Morocco, the shapes which the *ġinn* assume vary indefinitely. They appear to mankind not only in the shapes of serpents, scorpions, dogs, cats, wolves, jackals, lions, and other animals, but also as human

<sup>1</sup> Lane, *Arabian Society in the Middle Ages*, pp. 29 sq.

<sup>2</sup> von Kremer, *Culturgeschichte des Orients unter den Chalifen*, vol. ii, p. 259; Wellhausen, *Reste arabischen Heidenthums* (1897), p. 154.

<sup>3</sup> Doughty, *Travels in Arabia Deserta*, vol. ii, pp. 191 sqq.

<sup>4</sup> von Kremer, *loc. cit.*, vol. ii, p. 257.

<sup>5</sup> Wellhausen, *loc. cit.*, pp. 149 sqq.; von Kremer, *Studien zur vergleichenden Culturgeschichte* part ii, p. 26.

<sup>6</sup> Snouck Hurgronje, *Mekka*, vol. ii, p. 128.

<sup>7</sup> Lane, *Manners and Customs of the Modern Egyptians* (1896), p. 232.

<sup>8</sup> Doughty, *loc. cit.*, vol. i, p. 259.

<sup>9</sup> von Kremer, *Studien*, part ii, pp. 30 sqq.

<sup>10</sup> Lane, *Modern Egyptians*, p. 232.

<sup>11</sup> *The Koran*, sur. cxiii, v. 3.

<sup>12</sup> Klunzinger, *Upper Egypt*, pp. 389 sq.

beings, in which latter case they are sometimes of the stature of men, and sometimes of a size enormously gigantic.<sup>1</sup> An Arab told Doughty that "for a while he could perceive nearly a half part of all who bear the form of mankind to be jins."<sup>2</sup> In the *Arabian Nights* they are often represented as appearing, first of all, in a monstrous undefined shape, like an enormous pillar, and as only gradually assuming a human shape and less gigantic size. The extreme changeability of the appearance of the *jinn* is well illustrated in the twenty-second *Night*, where we read of an *ifrīt* who came out of a water-tank in the semblance of a mouse. It grew and grew, until it became, first a coal-black cat, then a dog, then an ass-colt, and finally it became a buffalo.

The Oriental *jinn* indicate their presence in very much the same way as their Moorish brethren. Lane says that it is the general belief of the Arabs of Egypt that the whirlwind which raises the sand in the form of a pillar is caused by the flight of one of these beings.<sup>3</sup> It seems quite probable that the idea expressed in the Koran<sup>4</sup> that the *jinn* were created of smokeless fire was derived from the strange phenomenon of *ignis fatuus*, which the present-day Arabs,<sup>5</sup> like the Moors, believe to be lighted by *jinn*. The superstition with regard to a falling star finds support in some texts of the Koran, according to which the *jinn* listen at the gate of heaven for scraps of the knowledge of futurity, and, when detected by the angels, are driven off, and pelted with shooting stars.<sup>6</sup> Many Arabs ascribe the erection of the Pyramids, and all the most stupendous remains of antiquity in Egypt, to Ġann Ibn-Ġann and his servants, the *jinn*, "conceiving it impossible that they could have been raised by human hands."<sup>7</sup> The Eastern *jinn* as well as the Western *gnān* are also disease-spirits. They cause asphyxia, lumbago, epilepsy, epidemics, madness, etc.<sup>8</sup> "Mankind, after the Arabs' opinion," says Doughty, "may be vexed in their bodies and minds by possession of the jan . . . Strange maladies and lunatic affections are ascribed to their influence; scorned and bewildered persons are said to be 'bejinned,' *mejnān*, demoniacs."<sup>9</sup> They also think that a man who is asleep ought not to be awakened; but the reason Doughty gives for this opinion differs from that assigned by the Moors. The sleeping man, he observes, "is as it were in trance with God."<sup>10</sup>

Iblis is, of course, known to all the Muhammedan peoples. In the Koran his name always appears without the article, as a proper name, whereas the Moors, as

<sup>1</sup> Lane, *Arabian Society*, p. 35; von Kremer, *Culturgeschichte*, vol. ii, p. 257; Wellhausen *loc. cit.*, p. 156.

<sup>2</sup> Doughty, *loc. cit.*, vol. ii, pp. 189 sq.

<sup>3</sup> Lane, *Modern Egyptians*, p. 232; cf. Wellhausen, *loc. cit.*, p. 151; von Kremer, *Studien* part-ii, p. 29, note 3.

<sup>4</sup> *The Koran*, sur. xv, v. 27; sur. lv, v. 14.

<sup>5</sup> Burton, in his translation of the *Arabian Nights*, vol. i, p. 398, note 3.

<sup>6</sup> *The Koran*, sur. lxxii, v. 9; cf. *ibid.*, sur. lxxvii, v. 5.

<sup>7</sup> Lane, *Modern Egyptians*, p. 236.

<sup>8</sup> Wellhausen, *loc. cit.*, pp. 155 sq.; von Kremer, *Culturgeschichte*, vol. ii, pp. 257 sqq.

<sup>9</sup> Doughty, *loc. cit.*, vol. i, pp. 258 sq.

<sup>10</sup> *Ibid.*, vol. i, pp. 249 sq.; cf. Wellhausen, *loc. cit.*, p. 163.

already said, also have the plural *ibālīs*, though it is rarely used. Al-Buchârî says that yawning comes from Iblis,<sup>1</sup> and the Egyptian fellah believes that "there is always a devil ready to leap down his throat in case he should happen to gape."<sup>2</sup>

The Eastern *ġinn* are afraid of iron and salt, as also of sacred words.<sup>3</sup> Baron von Kremer suggests that their fear of iron is owing to their fear of a loud rattling noise, such as that produced by metal, but this view is hardly correct.<sup>4</sup> Professor Tylor's explanation seems to me much more satisfactory. The *ġinn*, he observes, are essentially creatures belonging to the ancient Stone Age, and the new metal is hateful and hurtful to them.<sup>5</sup> It should be remembered that they are not afraid of any metal but iron or steel, and that they have the same dread of salt, which produces no noise, but which is also an innovation to the Arabs. There are Beduin tribes who, up to the present time, know nothing of salt, and find the use of it ridiculous.<sup>6</sup> It will perhaps be suggested that the *ġinn* fear salt because salt is sacred.<sup>7</sup> But bread is held in equal veneration by all Arabic peoples, and is nevertheless much liked by the *ġinn*; and iron is the very reverse of being sacred. In Morocco, at least, it is regarded as sinful to cleave bread with a knife. Again, the fear in which the *ġinn* stand of passages of the Koran is easily explicable from the fact that Muhammedanism was the successful rival religion, which, though recognising the existence of *ġinn*, attributed to them a very inferior position in the spirit-world. The Arabs of Egypt, according to Lane, believe that, during the month of Ramaḍan, the *ġinn* are confined in prison.<sup>8</sup> In Morocco, as we have already seen, the imprisonment is thought to last only until the twenty-seventh night of that month, and the same belief seems to prevail in Algeria.<sup>9</sup>

The Beduins of the Arabian Desert sprinkle blood upon newly-broken fallow, upon the foundation of a new building, and, also, when they open new wells or enlarge old ones.<sup>10</sup> In Al-Heġr, says Doughty, husbandmen "use to sprinkle new break-land with the blood of a peace-offering: the like, when they build, they sprinkle upon the stones, lest by any evil accidents the workmen's lives should be endangered."<sup>11</sup> It was the opinion of the early Arabs, as it is of the present Moors, that particular *ġinn* preside over particular places. It is said in the Koran, "And there are persons amongst men who seek for refuge with persons amongst the

<sup>1</sup> Wellhausen, *loc. cit.*, p. 163.

<sup>2</sup> St. John, *Village Life in Egypt*, vol. i, p. 262.

<sup>3</sup> Lane, *Modern Egyptians*, pp. 232, 235; von Kremer, *Studien*, part ii, pp. 36 sq.; Doughty *loc. cit.*, vol. ii, pp. 2 sq.

<sup>4</sup> von Kremer, *Studien*, part ii, pp. 36 sq.

<sup>5</sup> Tylor, *Primitive Culture* (1891), vol. i, p. 140.

<sup>6</sup> A. von Wrede's *Reise in Hadhramaut*, edited by von Maltzan, p. 94.

<sup>7</sup> Cf. D'Arvieux, *Voyage dans la Palestine* (1717), p. 167; Burton, *Pilgrimage to Al-Madinah and Meccah* (1898), vol. ii, p. 112.

<sup>8</sup> Lane, *Modern Egyptians*, p. 235.

<sup>9</sup> Certeux and Carnoy, *L'Algérie traditionnelle*, p. 83. The *ġinn* are there said to be confined in prison "dans les vingt-sept premiers jours du mois de Ramaḍan."

<sup>10</sup> Doughty, *loc. cit.*, vol. i, p. 452.

<sup>11</sup> *Ibid.*, vol. i, p. 136



*ġinn*."<sup>1</sup> In the commentary of Al-Ġalālān we find the following note upon this passage:—"When they halted, on their journey, in a place of fear, each man said, 'I seek refuge with the Lord of this place, from the mischief of his foolish ones.' " The modern Arabs have the same belief in the local lordship of the *ġinn*.<sup>2</sup> The Egyptian fellahs hold that "every place, every part of a house, is inhabited by its peculiar genius;"<sup>3</sup> and in Cairo, according to Lane, each quarter of the city is supposed to have its guardian-spirit, which has the form of a serpent.<sup>4</sup>

As for the expulsion of *ġinn*, Doughty observes that there are exorcists in Arabia who make people believe that, by reading powerful spells out of the Koran, they can terrify and expel the possessing demons.<sup>5</sup> According to Snouck Hurgronje, transference of disease is practised in Mecca. When a child is ill, its mother puts seven loaves of bread under its pillow, and then, after the child has slept on them for a night, gives them to the dogs to eat.<sup>6</sup> In the literature on the Eastern Arabs I have found no exact counterpart to the Moorish *diāfa*, but a very similar custom is reported to exist in Timbuctoo. When a man is sick, we are told, some saint is asked what animal must be sacrificed for the recovery of the patient, whether a white cock, a red cock, a hen, an ostrich, an antelope, or a goat. "The animal is then killed in the presence of the sick, and dressed; the blood, feathers, and bones are preserved in a shell and carried to some remote spot, where they are covered and marked as sacrifice. No salt or seasoning is used in the meat, but incense is used previous to its preparation. The sick man eats as much as he can of the meat, and all present partake; the meat and what else is dressed with it, must be the produce of charitable contributions from others, not of the house or family; and every contributor prays for the patient."<sup>7</sup> No idea of a transference of the disease is involved in this practice. Those parts of the animal which are not eaten by the patient and his friends are expressly said to be covered, which is certainly not the case in Morocco, where an observant eye can frequently detect remains of the *diāfa*-food on the roadside. Considering the important part the Gnawa play as exorcists in Morocco, it seems more than probable that many practices connected with the expulsion of *ġnūn* have a Sudanese origin.

The Eastern *ġinn* display no more individuality than the Moorish ones; rather less. The Moorish belief in *ġinn*-sultans is evidently local. The *ġinn*-society is made up after human fashion, and, as the ancient Arabs were democrats, there can be no doubt that their *ġinn* were so too. Even Iblis is of foreign extraction.<sup>8</sup> On the other hand, as Morocco is a monarchy, it is only natural that its *ġnūn* also should be monarchists. Exactly the same is the case in India. From Jaffur Shurreef's interesting account of the customs of the

<sup>1</sup> *The Koran*, sur. lxxii, v. 6.

<sup>2</sup> St. John, *loc. cit.*, vol. i, p. 262.

<sup>3</sup> Doughty, *loc. cit.*, vol. i, p. 259.

<sup>4</sup> Jackson, *An Account of Timbuctoo and Housa . . . by el Hage Abd Salam Shabeeny*, p. 33.

<sup>5</sup> von Kremer, *Culturgeschichte*, vol. ii, p. 255; Wellhausen, *loc. cit.*, p. 157.

<sup>6</sup> Lane, *Arabian Society*, pp. 38 sq.

<sup>7</sup> Lane, *Modern Egyptians*, pp. 235 sq.

<sup>8</sup> Snouck Hurgronje, *loc. cit.*, vol. ii, p. 121.



Muhammedans of that country, it appears that their various tribes of *ġinn* have each their king.<sup>1</sup> There is, however, in the East, also, one member of the *ġinn*-species which possesses a distinctly marked individuality. Doughty speaks of a monstrous creature believed in by some desert Arabs, who call it Sa'lewwah. "This salewwa is like a woman, only she has hoof-feet as the ass." A desert man told him that "she entices passengers, calling to them over the waste by their names, so that they think it is their own mother's or their sister's voice."<sup>2</sup> Von Kremer identifies this being with Ġule, a female demon often mentioned in Arabian tales. Ġule passes a solitary existence in the deserts, and appears to persons travelling alone in the night, and, being supposed by them to be herself a traveller, lures them out of their way. She not only converses with the travellers, but sometimes prostitutes herself to them. She resembles both a woman and a brute. She has long pendant breasts, and the feet of an ass. Moreover, she is a man-eater.<sup>3</sup> This description of Sa'lewwah-Ġule recalls all the chief characteristics of the Moorish 'Aisha Kāndisha, except that the latter is intimately connected with the water, whereas the former is a desert demon. But this distinction is hardly important, considering that the Moorish *ġnūn* generally have their favourite abodes in watery places. I believe then that 'Aisha Kāndisha is Sa'lewwah-Ġule, somewhat modified; and just as 'Aisha Kāndisha is married to Ḥammu Kāiu, so Ġule has a male pendant called Kuṭrub.<sup>4</sup> The Moorish *ġuāl*, on the other hand, have retained their Eastern character of residing in the desert, where they keep up their traditional reputation for feeding on human flesh.<sup>5</sup> The 'afārit(s), too, have their home in the East.<sup>6</sup>

Having thus analysed the belief in *ġinn* as it is known from direct observation and written records, we shall now turn to the question of its origin. The most famous explanation has been attempted by Professor Robertson Smith. He maintains that it requires a very exaggerated scepticism to doubt that the *ġinn* are, mainly, nothing else than more or less modernised representatives of animal kinds, or totem animals. "In the old legends," he says, "the individual *ġinnī* who may happen to appear to a man has no more a distinct personality than a beast. He is only one of a group of beings which to man are indistinguishable from one another, and which are regarded as making up a nation or clan of superhuman beings, inhabiting a particular locality, and united together by bonds of kinship and by the practice of the blood-feud, so that the whole clan acts together in defending its haunts from intrusion, or in avenging on men any injury done to one of its members. This conception of the communities of the *ġinn* is precisely identical with the savage conception of the animal creation. Each kind of animal is regarded as an organised kindred, held together by the ties of blood and the

<sup>1</sup> Jaffur Shurreef, *Customs of the Mussulmans of India*, p. 217.

<sup>2</sup> Doughty, *loc. cit.*, vol. i, p. 54.

<sup>3</sup> von Kremer, *Studien*, part ii, p. 54; Lane, *Arabian Society*, pp. 42 sq.

<sup>4</sup> Lane, *Arabian Society*, p. 43.

<sup>5</sup> *Idem*, *Modern Egyptians*, p. 237.

<sup>6</sup> *Ibid.*, p. 236; Burton, in his translation of the *Arabian Nights*, vol. i, p. 10, note 2.

practice of blood revenge." The *ġinn* usually appear to men in animal form, though they can also take the shape of men. This last feature, however, cannot be regarded as constituting a fundamental distinction between them and ordinary animals in the mind of the Arabs, who believed that there were whole tribes of men who had the power of assuming animal form. The supernatural powers of the *ġinn* do not differ from those which savages, in the totem stage, ascribe to wild beasts. They appear and disappear mysteriously, and are connected with supernatural voices and warnings, with unexplained sickness or death, just as totem animals are: they occasionally enter into friendly relations or even into marriages with men, but animals do the same in the legends of savages: finally, a madman is possessed by the *ġinn*, but there are a hundred examples of the soul of a beast being held to pass into a man. Like the wild beasts, the *ġinn* have, for the most part, no friendly or stated relations with men, but are outside the pale of man's society: they frequent savage and deserted places far from the wonted tread of men, their special haunts being just those which wild beasts most frequent. Ultimately, however, the only animals directly and constantly identified with the *ġinn* are snakes and other noxious creeping things, which continue to haunt and molest men's habitations after wild beasts have been driven out in the desert.<sup>1</sup>

We shall see whether these statements are correct, and, if so, whether they have any bearing on totemism. It is true that, among the *ġinn*, the individual has no distinct personality, and is only one of a group or a clan. It is also true that each kind of animal is often regarded by savages as analogous to a more or less organised community, in which the individual is lost sight of. But the same holds good, to a great extent, for savage men. They form tribes or clans, and the members of each group are "united together by bonds of kinship and by the practice of the blood feud," whilst the members of the group are hardly taken into account at all as individuals. It is from this organization of human society that the idea of animal tribes is derived. Man has a tendency to anthropomorphism. He models nature after the fashion of his own nature. The Moors believe that all animals had a language in Sidna Sulejman's days. They also say that the horse prays to God when he stretches out his leg, and that the donkey which falls down asks God that the same should happen to its master. Now, as is well known, man also attributes human qualities to the supernatural beings in whose existence he believes. He does so to gods, and he does so to demons. Why, then, should we believe that the similarity between the *ġinn*-clans and the several species of animals is due to identity, instead of regarding it as the natural result of an analogous derivation from the common root-idea of human society? How closely the *ġinn* imitate men, is shown by the fact that in countries where there are sultans or kings, as in Morocco and India, each nation of *ġinn* also has its sultan or king.

Professor Robertson Smith attaches much importance to the fact that the *ġinn* most frequently appear to men in animal form. He does not deny that, according to Arab beliefs, they also may appear in the shape of human beings,—

<sup>1</sup> Robertson Smith, *The Religion of the Semites* (1894), pp. 120, 126 *sqq.*

although he underrated the frequency of such cases,—but he thinks that he solves the difficulty by a reference to the tales of men who were transformed into animals. Such tales are met with in all Arab countries. The Moors say that the monkey was once a man whom God changed into his present shape because he performed his ablutions with milk, and that the stork was a *kaḍi*, or judge, who was made a stork because he passed unjust sentences upon his fellow-creatures. But such stories are not to the point. Professor Robertson Smith gives no instance of an animal assuming the shape of a man. Moreover, the *ġinn* are also disease spirits. They are believed, both in Morocco and in Arabia, to cause disease by actually entering into the man who is taken ill, a belief which manifests itself very plainly in the practices of the exorcists, and I see no reason for not regarding this belief as equally ancient and genuine as the rest. A totem animal, it is true, may also cause disease in a similar way, but, so far as I know, only if it is eaten.<sup>1</sup> Savages know nothing of microbe totems.

It should be borne in mind that the *ġinn* only incidentally, never permanently or necessarily, have the shape of certain animals. One of their chief characteristics is their extreme changeability. They make themselves visible or invisible just as they like, change rapidly from one form into another, and, at their pleasure, take up their abode wherever they please. The totem, on the other hand, is a class of material objects, and a totem animal is essentially an animal, though assumed to be endowed with some mysterious power. Further, the animal totem is an animal species, and every member of it is a representative of the totem, whereas the *ġinn*, when appearing in the shape of an animal, does so only individually. There is absolutely no connection known between certain tribes of *ġinn* and certain species of animals, nor is the whole animal species looked upon as *ġinn*, although these at times assume the form of individual members of it. Every dog, every cat, every tortoise is not supposed to be a spirit in disguise. Professor Robertson Smith maintains, indeed, that some animal species, especially the lion, were objects of actual worship among the Arabs,<sup>2</sup> but Baron von Kremer, the learned Arabic scholar, has shown that this assertion has no foundation.<sup>3</sup> The Moors avoid killing certain species. He who kills, and especially he who eats, a crow, they say, turns mad. They account it a sin to kill a stork, since the stork was once a judge. They maintain that he who kills a toad will get fever, or die, and they are afraid of destroying tortoises. They do not like to kill white spiders, because a white spider had once woven its web across the mouth of the cave where Muhammed was concealing himself from his enemies. These, when they came to the cave in their search, and saw the web, thought that no one could have recently entered it, and so passed it by without examining it, and the Prophet escaped. Many Moors do not eat white chickens, because they are the birds of Mulai 'Abd l-Kāder, the great saint. Near the

<sup>1</sup> Cf. Frazer, *Totemism*, pp. 16 sqq.

<sup>2</sup> Robertson Smith, *Kinship and Marriage in Early Arabia*, pp. 192 sqq.

<sup>3</sup> von Kremer, *Studien*, part ii, pp. 20 sq.

village Ební Ūmras, belonging to the tribe Ební 'Arús, dogs and goats are often seen in the neighbourhood of a haunted spring, and he who beats them is said to go mad. In the same district, within the precincts of Sīdi Heddi's sainthouse, there are certain fish which are fed by the clients of the saint, and never eaten, being regarded as sacred. There may thus be various reasons for abstaining from killing certain kinds of animals, and one reason is undoubtedly the belief that the animal might be a *ġinn*, which could avenge the injury inflicted on it; but this does not indicate previous totemism. It is significant, and it seems almost strange, that no closer connection exists between the *ġinn* and particular animal species than what is actually the case. So far as we know, there is only one kind of animal which, according to ancient Arab beliefs, permanently possesses a demoniacal nature, viz., the snake. "In every snake," says Wellhausen, "there is a spirit embodied, now a malevolent, now a benevolent."<sup>1</sup> Muhammed, whilst commanding his followers to kill the obnoxious snakes, expressly forbid them to hurt those innocuous ones which they found in their houses.<sup>2</sup> In modern Arabia, according to Niebuhr, harmless snakes "take their refuge in the walls of houses, and are esteemed agreeable guests by the inhabitants."<sup>3</sup> There are also traces of veneration for household snakes in Morocco, where a snake which is seen in a house is frequently taken for a good *ġinn*, the guardian-spirit of the house.<sup>4</sup> The fact that the ancient Arabs regarded snakes as *ġinn*, however, does not involve that the snakes were totem animals. Animal worship is not the same as totemism. Moreover, according to Nöldeke, no trace of actual worship of snakes is to be found in ancient Arabia.<sup>5</sup>

The statement that the special haunts of *ġinn* are the places most frequented by wild beasts, is certainly not in accordance with facts. We have seen that men are surrounded by *ġinn*, that the *ġinn* haunt places where no wild beasts ever go, even human habitations, that every place has its owners, its *ġinn*, and that their principal abode is the under-world. Finally, a totem is not only a class of objects which are regarded with superstitious respect, but one to which man believes himself to stand in an intimate and friendly relation. The *ġinn*, on the contrary, habitually appear as man's enemies. Professor Robertson Smith is aware of this difficulty, but tries to reconcile it with his theory. The general answer to it, he says, "is that totems, or friendly demoniac beings, rapidly develop into gods when men rise above pure savagery. . . . It is natural that the belief in hostile demons of plant or animal kinds have given way to individual

<sup>1</sup> Wellhausen, *loc. cit.*, p. 153.

<sup>2</sup> Nöldeke, *Die Schlange nach arabischem Volksglauben*, in *Zeitschrift für Völkerpsychologie*, vol. i (1860), pp. 415 sq.

<sup>3</sup> Niebuhr, *Travels through Arabia* (1792), vol. ii, p. 278.

<sup>4</sup> Veneration for household snakes seems to be more prevalent among the Berbers than among the North African Arabs; see Dr. Brown's note in his edition of Leo Africanus, *The History and Description of Africa* (1896), vol. ii, pp. 655-657.

<sup>5</sup> Nöldeke, *loc. cit.*, p. 416.



gods, whose original totem associations are in great measure obliterated."<sup>1</sup> Whatever else may be said against this reasoning, it is enough here to point out that Professor Tylor has recently argued, with his usual force, against premature conjectures as to the origin of deities from totem animals, justly protesting against "the manner in which totems have been placed almost at the foundation of religion."<sup>2</sup>

It seems to me, then, that the application of the totem theory to the Arabic *ġinn* involves a radical misunderstanding of their nature. Writers on the history of religion often mould the religious phenomena into too narrow forms, whether the form is headed ancestor-worship or totemism. The conception of *ġinn* implies a generalization on a much larger scale. The *ġinn* are beings invented to explain what seems to fall outside the ordinary pale of nature, the wonderful and unexpected, the superstitious imaginations of men who fear. They dwell under the earth, not, I think, because they have been driven there by a new triumphant religion, but because men fear most in the dark. They so frequently assume the shape of animals, not because there is any intrinsic connection between animals and *ġinn*, but because the *ġinn* represent active forces, and, among living things, the animals are the most mysterious. Within the region of wonder, they act as disease-spirits, as nature-spirits, as guardian-spirits, as animal-spirits, even as human spirits. But they do not cover the whole field of the supernatural. There are spirits that have risen to a higher level, that have become objects of divine worship, gods, and that work miracles either directly or through some medium, for instance, a saint. The ancient Arabs, so far as we know them, divided the world of the supernatural between gods and *ġinn*, also, as it seems, giving some share of it to the ghosts of dead men. With this restriction the *ġinn* are what their name indicates. *Ġinn* originally means "the secret," "the hidden,"<sup>3</sup> in fact, the mysterious.

#### DISCUSSION.

Mr. CROOKE gladly recognised the value of Dr. Westermarck's contribution to the knowledge of a very obscure chapter of demonology. He regarded this refutation of Dr. Robertson Smith's theory of the connection of the *Ġinn* with totemism as conclusive. On the other hand, there appears much to be said for the theory that the *Ġinn* originally represented the wilder and hence unaccounted for forces of Nature—the spirits of the desert and waste places which are naturally regarded as the home of mystery. In this view, their identification with animals seems to be sufficiently accounted for. They are, in fact, survivals of the early indigenous animistic beliefs, which were at a later date absorbed and developed under the influence of Islām.

<sup>1</sup> Robertson Smith, *Religion of the Semites*, pp. 443 sq.

<sup>2</sup> Tylor, "Remarks on Totemism," in *Journ. Anthropol. Inst.*, Aug.-Nov., 1898, p. 144.

<sup>3</sup> Nöldeke, in *Zeitschrift für Völkerpsychologie*, vol. i, p. 413, note \*\*\*; Wellhausen, *loc. cit.* p. 152.



Professor TYLOR, in expressing the sense of the meeting as to Professor Westermarck's study of the Ġinn in Morocco, remarked that the first sentence of the paper showed the line along which he had approached the problem. The late Professor Robertson Smith, by his work on the *Religion of the Semites*, vastly improved the method and enlarged the horizon, of current theology by the introduction of anthropological evidence. But through the influence of his friend J. F. McLennan's *Primitive Marriage*, he was led to introduce too confidently the doctrine of Totemism as a leading factor on the religious side of ancient society, and he put forward the idea that the Arab beliefs as to the Ġinn were evidence of an early stage of Totemism among the Semitic race. This view appearing to Dr. Westermarck questionable, he collected during his residence and travel in North Africa the particulars as to the beliefs as to the Ġinn prevailing there, which are generalised in his paper read to-night. The result tells strongly against the identification of the ġinn-belief with the totem-belief. The collection of the analogies alleged between the doctrine of ġinn-animals with the doctrine of totem-animals shows, indeed, resemblances in the ideas of Arabs and other peoples, as to the relation of animals to men, but the word totem indicates the importation of an extraneous element into the discussion, which would no doubt be better conducted under the heading of animal worship.

Independently of the question of totemism, the mass of beliefs connected with the Ġinn make us hope that Dr. Westermarck will use his opportunities to continue his researches in Morocco, and to follow up a line of research of which he as yet only indicates the need; namely, that of separating the other native ideas of Morocco from the imported Moslem beliefs which extend from the Straits of Malacca to the Straits of Gibraltar. When he points out that the Ġinn are afraid of salt as well as of iron, this is apparently to carry Arab tradition back to a saltless as well as an ironless antiquity. How they have retained old prejudices while attaching new meanings to them, seems to come into view, when it is noticed that they object to waking a sleeper, but not for the usual reason, and that they object to looking at themselves in a mirror, but seemingly have forgotten the ancient reason they doubtless had. When Dr. Westermarck resumes his inquiries in North Africa, he may be able more or less to clear up the interesting question which he has doubtless had often before him, how to distinguish and delimit the two ways in which men or demons can appear and behave as beasts. Is transformation of Ġinn into cats or tortoises or snakes something related to transmigration of souls, or is it considered to take place by quite a different process?

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ORDINARY MEETING.

DECEMBER 12TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The PRESIDENT introduced Mr. W. L. H. DUCKWORTH, who exhibited some new forms of Anthropometrical instruments manufactured abroad.

Dr. GARSON doubted if they were better or cheaper than some which he had lately had made in England, which are described in the new edition of *Notes and Queries*.

The PRESIDENT thanked Mr. DUCKWORTH, and complimented him on the neatness and usefulness of the instruments.

He then introduced Mr. WM. CROOKE, who proceeded to read his paper:—  
"Survivals in primitive rites of the disposal of the dead, with special reference to India."

Discussion was carried on by Mr. WM. GOWLAND, Dr. GARSON, Mr. A. L. LEWIS, and Mr. W. L. H. DUCKWORTH.

Mr. CROOKE replied to questions, and the PRESIDENT closed the proceedings with a vote of thanks to Mr. Crooke for a very valuable paper.

# PRIMITIVE RITES OF DISPOSAL OF THE DEAD, WITH SPECIAL REFERENCE TO INDIA.

By W. CROOKE, B.A.

[READ AT THE MEETING, DECEMBER 12TH, 1899.]

LAST year in a paper read before this Institute I discussed certain questions connected with the Hill Tribes of Central India. I now propose to consider with somewhat greater detail the methods of disposal of the dead as practised in India.

Three important groups of custom centre round the three events of birth, marriage and death. The observances characteristic of these depend upon certain well-defined principles of savage philosophy, among which that of Taboo is prominent. By this is meant the conception of certain things as dangerous to handle or to have to do with. And this Taboo, like an infectious disease, is transmittable. Thus, the *enceinte* woman, the new-born child, the youth and maiden at puberty and marriage, and the corpse, are all more or less taboo. And the leading intention of the rites performed in connection with these events is to protect the tabooed individual as well as those brought in contact with him from the contagion which emanates from him.

Of these three great groups of custom that connected with death is the most complex and the most interesting. Taboo nowhere exhibits its potency more clearly than in connection with the dead. It influences races who believe that the ghost is friendly, as well as those who dread its malignity. For our present purpose this group of customs has this additional interest that we can support our interpretation of usages now current among savage or semi-savage peoples, by a great body of archæological evidence, which in the case of the rites of birth and marriage is necessarily non-existent.

In India, it is true, prehistoric archæology is still in its infancy. But enough has already been discovered to aid largely in the exploration of the usages of the existing races, and to prove that we have here a comparatively virgin field, which is likely to yield an abundant harvest whenever its investigation comes to be seriously undertaken.

All I propose to attempt at present is to consider the various modes of disposal of the dead.

These may be roughly divided into two classes—those in which the object is to preserve the body, or certain relics of it; and, secondly, those in which the ruling intention is to put the dead out of sight.

Of the first class we have a familiar example in the Egyptian custom of mummification, where the intention was to provide a refuge for the Ka or separable soul.<sup>1</sup> In the second division comes the habit of burial, which suggested the belief in an underground world of the dead. Cremation, on the other hand, was intended to etherealise the ghost and to permit it to reach its abode in heaven. But everywhere, as we shall see, we find these conceptions overlapping each other, or one gradually taking the place of the other.

To begin, then, with mummification. We find it in its fullest development in Egypt and in parts of the American Continent. But in Egypt it was not a primitive practice. It was unknown to the Pharaohs of the First and Second Dynasties, and the custom may have been due to the accidental fact that at El-Kab, opposite the early capital of Upper Egypt, the ground is impregnated with natron, which would have preserved the bodies buried in it from decay.<sup>2</sup> Elsewhere, as in the case of the royal graves at Mycenæ, it bears the appearance of a foreign custom, introduced only tentatively or in some special cases.<sup>3</sup> The references in the Homeric poems to the miraculous preservation from decay of the bodies of Hector and Patroclus, and the use of fat, oil and honey to preserve the corpse, suggest that the practice of embalmment may have been adopted to some extent.<sup>4</sup>

The evidence from India points in much the same direction. We find the same folk-belief in the possibility of securing the body from decay in the Deccan tales of Chandan Râja and Sodewa Bai.<sup>5</sup> There is, again, the early legend of Nimi, told in the Vishnu Purâna, whose corpse was preserved in oil; in the Râmâyana King Dasaratha is embalmed in oil; in the Mahâbhârata the corpse of Pandu is smeared with sandal paste.<sup>6</sup>

In modern India the evidence is equally fragmentary. Thus, in Kanaka, in Orissa, the corpse of the local chief is preserved in oil, and not cremated until his successor is installed; the throne, they say, must never remain empty.<sup>7</sup> In other cases, the practice seems to be based merely on convenience, as when the Khasiyas of the Himalaya preserve in honey those who die in the rainy season till the weather clears sufficiently to admit of cremation being performed.<sup>8</sup> But the practice assumes a clearer ritual significance among the Maghs of Bengal, whose custom it is to dry and embalm the bodies of their priests and persons of high

<sup>1</sup> The connection of the practice of mummification with the theory of the Ka is disputed by Professor F. Petrie, whose view is opposed by Professor Sayce, *Folk-lore*, ix, 339. The common view is held by Erman, *Life in Ancient Egypt*, 307.

<sup>2</sup> Sayce, *loc. cit.*

<sup>3</sup> Schuchhardt, *Schliemann's Excavations*, 158; Frazer, *Pausanias*, iii, 107, 155.

<sup>4</sup> *Iliad*, vii, 85; xvi, 465, 674; xix, 38; xxiii, 168, 187, 244.

<sup>5</sup> Miss Frere, *Old Deccan Days*, 227, 242.

<sup>6</sup> Wilson Hall, *Vishnu Purâna*, iii, 328; *Râmâyana*, Book ii, 68; *Mahâbhârata*, Adi Parva, sec. 66; *Journ. Anthropol. Soc., Bombay*, i, 39 seq.

<sup>7</sup> *Journ. Anthropol. Soc., Bombay*, iv, 311.

<sup>8</sup> Hooker, *Himalayan Journal* (Minerva Library), 486 seq.; Risley, *Tribes and Castes of Bengal*, ii, 34.

social position, and keep them for a year, when the funeral rites are done, or among the Kûkis of Assam, who smoke dry the bodies of chiefs and headmen, keeping them for two months, after which they inter them with great respect.<sup>1</sup>

We may, perhaps, suspect that the same idea underlies the practices of some of the modern ascetic bodies. Thus, by the Mânabhâv, religious beggars in Bombay, the grave is filled up with salt and earth; the Lingâyats of Pûna place round the corpse as much salt as they can afford, and then fill in the grave; the Gâvlis, a class of shepherds in Sholapur, fill in the grave with earth up to the level of the neck of the corpse; the head being sacred, it is covered with salt and then earth is piled over it: in Upper India the Gusâin mendicant is buried in salt.<sup>2</sup>

The Persians employed wax and the Assyrians honey in preserving the corpse, and it is possible that the practice may have reached India by this route. The Râjputs, among whom in particular the usage prevailed, are the result of a Yu-echi invasion from Central Asia. By the adoption of polyandry they are linked with the Himalayan races among whom it is still an institution. Among the Assam tribes usages of the same kind are suggestive of Mongoloid influence. At the same time, it is not impossible that the custom may have been independently evolved.

Next comes the custom of platform burial, which was possibly based on various converging lines of thought. First, came the desire to protect the corpse from profanation, and with this was possibly combined the idea of preventing the corpse, which is taboo, from touching the ground, and thus affecting the productive powers of the soil. Thirdly, there is the intention of preserving the bones as relics or charms. Many primitive races object to break the bones of animals, which they have eaten or sacrificed, from a belief in the resurrection of beasts, from a fear of intimidating other creatures of the same kind, or offending the ghosts of those which are slain.<sup>3</sup> The opinion, in short, underlying the various customs of preservation of remains was, to use Dr. Brinton's words, "that a part of the soul, or one of the souls, dwelt in the bones: that these were the seeds, which planted in the earth, or preserved unbroken in safe places, would in time put on once again a garb of flesh and germinate into living human beings."<sup>4</sup>

The habit of platform burial is widespread. We find it, for instance, in Fiji, where the body is placed on a platform, round which a child is passed to baffle the ghost, and the corpse is eventually buried: in Timor Laut those who die in

<sup>1</sup> Risley, *Tribes and Castes of Bengal*, ii, 34; *Journ. Anthropol. Inst.*, xxvi, 195; Hunter, *Statistical Account of Assam*, ii, 187; Dalton, *Descriptive Ethnology of Bengal*, 47, 56. Compare similar rites in the case of African chiefs, Featherman, *Nigritians*, 110, 156, 427, 441.

<sup>2</sup> *Bombay Gazetteer*, xvii, 183; xviii (1), 272; xvii, 214; xx, 151; Crooke, *Tribes and Castes of the North-Western Provinces*, ii, 469; Logan, *Malabar*, i, 130.

<sup>3</sup> Frazer, *Golden Bough*, ii, 124 *seqq.*

<sup>4</sup> *Myths of the New World*, 257. On bones kept as a palladium, see Frazer, *Pausanias*, iv, 95.



war or by violence, or in other words, the tabooed dead, are buried, while those who die a natural death are placed on rocks or platforms.<sup>1</sup> Among the Damaras it is combined with house burial. The chief sometimes requests that instead of being buried, his corpse may be placed in a squatting position on a platform erected in his hut, which is surrounded by a hedge or palisade.<sup>2</sup>

We have, perhaps, a variant of the same practice in the custom of burial on high places, as among the Tipperahs of Bengal, who place the ashes with the arms of the dead man on a hill, or the Khyens and Kirântis of Assam, who bury their dead on a sacred mountain, with the implied confidence that they are thus nearer their deified ancestors, who have gone to heaven.<sup>3</sup>

One explanation of the practice, to which reference has already been made, comes out in the case of the Aleuts, who, after clothing and masking the corpse, place it in a cleft of the rocks, or swing it in a boat cradle from a pole in the open air; for, they say, the corpse must not touch the ground, obviously because it is taboo and may injure the growth of the crops.<sup>4</sup> It is possibly for the same reason that the Burmese swing the coffin backwards and forwards before lowering it into the grave; they do this, they say, as a salute to the spirits of the dead who may here represent the chthonic powers which control vegetation.<sup>5</sup> So the Todas lift up the corpse and swing it three times from side to side before laying it on the pyre face downwards, in which the idea of baffling the ghost is possibly the predominant motive.<sup>6</sup>

Platform burial in India seems to be confined to the Nâgas of Assam, who continue this among other archaic practices in connexion with death.<sup>7</sup> They wrap the corpse in mats and dispose it on a platform raised and fenced in, while those who die by violent deaths, and are thus specially taboo, are tied up to trees on the spot where they fell without covering or ornament.<sup>7</sup> Special taboo is thus marked by the corpse being left nude, as among the Dravidians of Madras, the Mhârs, a menial tribe in Western India and the Gonds of the Central Hill Tract: it shows itself in a modified form even among the Chitpâvan Brâhmans of Pûna, who at the time of cremation remove and throw aside the head-shroud and the cloth covering the feet of the corpse.<sup>8</sup>

In the custom common among the Northern Mongolians, the Parthians, the Hyrkanians, the ancient Persians, and the modern Pârsis, who are, or were, in the habit of deliberately exposing the corpse to be devoured by birds of prey, we reach a practice the origin of which is directly associated with Central Asia.<sup>9</sup>

<sup>1</sup> *Journ. Anthropol. Inst.*, O.S., x, 145; xiii, 13, 298; xxiv, 309; xxvii, 431.

<sup>2</sup> Featherman, *Nigritians*, 670.

<sup>3</sup> Risley, *loc. cit.*, ii, 325; and compare Dalton, *loc. cit.*, 104 seq.; Yarrow, *Report of American Bureau of Ethnology*, 1879-80, p. 125; Bancroft, *Native Races*, i, 132; iii, 148.

<sup>4</sup> Bancroft, *loc. cit.*, i, 93.

<sup>5</sup> *Burmah Gazetteer*, i, 386.

<sup>6</sup> Grigg, *Nilagiris*, 198.

<sup>7</sup> *Journ. Anthropol. Inst.*, O.S., xi, 203; xxii, 247.

<sup>8</sup> *Folk-lore*, v, 25; *Bombay Gazetteer*, xxii, 114; Hislop, *Papers relating to the Aboriginal Tribes of the Central Provinces*, 19, App. vi.

<sup>9</sup> Rajendralâla Mitra, *Indo-Aryans*, ii, 160.

The dog was regarded as the sacred animal of the tribe—the totem, a member of the clan itself, as Dr. Jevons<sup>1</sup> chooses to call him, and the future happiness of the soul was regarded as conditional on absorption by, or communion with, the sacred beast. If this be so, the practice would be a survival of the earlier custom, when the deceased was eaten by the kin. But the practice seems to have been always repellent to the Hindu mind, and in the Mahābhārata the horror felt at the dead being devoured by animals and fowls of the air is as well marked as in the Homeric poems.<sup>2</sup> It is within the Buddhist area that the custom shows itself most clearly. In Siam, for instance, if a person have ordered that his corpse shall be delivered to vultures and crows, a functionary cuts it up and distributes it to birds of prey.<sup>3</sup> In other places the custom is intended to honour the more distinguished dead. The minstrels of the Woloffs, for instance, are placed in a hollow tree as a prey to hyænas or vultures.<sup>4</sup> Elsewhere, again, the opposite feeling prevails, as when the Wagunda bury chiefs and expose slaves to wild beasts, and the habit of leaving warriors slain in battle to be devoured is common to the Latukas of East Africa, and the Pericuis of Mexico, who suppose that a future life was accorded only to those dying by a natural death.<sup>5</sup>

I venture to suggest that we may find a survival of rites of this class in the modern Hindu custom of feeding crows on the Pindas, or sacred balls, at the grave or place of cremation. The balls are laid out, and the mourners cannot leave the spot till the crows deign to eat them. It seems clear that the ball is supposed to be a part of the dead man, or to represent his flesh, because some castes, like the Parājiya Brāhmans, and Oswāl Mār-wādīs of Western India, tie one of these balls on the chest of the dead man as he is being removed for cremation, and this ball is given to the crows.<sup>6</sup>

The sacrificial motive of the offering is also marked by the fact that, if the balls are not consumed, the ghost is supposed to become angry and uneasy. The Sunārs of Ahmadnagar in this case suppose that the ghost will haunt the living; the Berads, jungle folk in Bijapur, think that the ghost is uneasy about the future of its family, and the chief mourner has to promise to provide for them.<sup>7</sup> If the crows refuse to touch the balls, other precautions are adopted. Thus, among the menial tribes, the Dāvris prepare an earthen crow and make it touch the offerings with its beak; the Bhois touch the ball with a crow made of the sacred Kusa grass, and the Ghisādīs give the ball to a cow; while among people of a higher grade, the Shenvi Brāhmans of Kanara touch the ball with a blade of sacred grass.<sup>8</sup>

The order in which the balls are eaten is also a matter of importance. The

<sup>1</sup> *Introduction to the History of Religion*, 203 seq.; Hartland, *Legend of Perseus*, ii, 305.

<sup>2</sup> *Mahābhārata*, trans. Ray, v, 271, 468; vi, 34.

<sup>3</sup> Bowring, *Siam*, i, 122 seq.

<sup>4</sup> Featherman, *Nigritians*, 358.

<sup>5</sup> Featherman, *loc. cit.*, 103, 81; Bancroft, *loc. cit.*, iii, 542.

<sup>6</sup> *Bombay Gazetteer*, xvi, 70; xviii (1), 424.

<sup>7</sup> *Ibid.*, v, 45; xvii, 81.

<sup>8</sup> *Ibid.*, xvii, 136, 207; xxiii, 96.

right ball should be eaten first, and it is in this connection important that the Pârsis, when they expose a corpse in their Towers of Silence, rejoice if a bird pecks out the right eye first, and mourn if the left be selected.<sup>1</sup> The rite is still further degraded in the case of the Kâmis of Bengal, who after laying out the food for the dead man, watch anxiously till a fly or other insect lights upon it.<sup>2</sup> Here, however, the dominant idea probably is that the fly represents the soul of the dead man.

At any rate, we find this custom of feeding the crows at death among the most degraded tribes, like the Kâthkaris, Berads, Bhils, and Kâmis, and it seems possible that it may have arisen among them quite independently of foreign influence.<sup>3</sup>

In some cases the corpse is exposed not with the direct intention that it may be devoured by beasts and birds. Mountain burial prevails largely along the Himalaya. The Kirântis bury their dead on a hill-top in a loosely constructed stone tomb; in Spiti the dead are exposed on hills or sometimes cut up and exposed to beasts and birds.<sup>4</sup> Many authorities record similar customs among the Mongols and Tibetans, while the Kâfirs of the Hindu Kush expose their dead in coffins on mountains, and this up to quite recent times was the habit of the Bushkariks of the same region.<sup>5</sup> Here they follow a custom known to prevail among the dwarf race of the Paggi Islands, the Nias and Dayaks of Borneo.<sup>6</sup> On the whole, it seems doubtful whether such customs are racial; they seem, in many cases, to depend merely on caste or social changes.

The river-drift hunters and other early tribes do not seem to have disposed of their dead by interment,<sup>7</sup> and this is characteristic of some of the ruder tribes in India to this day. Thus, the Berads of Pûna bury their dead only in the very rudest way, or, as they say, "leave them in the bush to become spirits."<sup>8</sup> Sometimes, again, we find simple bush burial, as among the Anus of Burmah and the Khotils of Khândesh, who bury their dead in the jungle without form or ceremony, merely piling a few stones to mark the grave, while the Chalikata Mishmis of Assam bury the dead man with his arms and clothes in the forest.<sup>9</sup> The custom is slightly advanced among the jungle folk of Mirzapur, like the Ghasiyas and Agariyas, who perform the farce of cremation, often merely singeing the face and feet of the corpse and exposing it in the forest.<sup>10</sup> We have, I conjecture, a survival of this exposure of the corpse in the bush in the habit common in India of laying

<sup>1</sup> *Bombay Gazetteer*, xxi, 181; xvii, 157; xxiii, 192; xv (1), 167.

<sup>2</sup> Risley, *loc. cit.*, i, 395.

<sup>3</sup> *Bombay Gazetteer*, xiii (1), 164; vi, 32.

<sup>4</sup> *Settlement Report*, 204.

<sup>5</sup> Yule, *Marco Polo*, i, 188; *Journ. Anthropol. Inst.*, iii, 356; Biddulph, *Tribes of the Hindu Kush*, 71.

<sup>6</sup> Yule, *loc. cit.*, ii, 241; Roth, *Natives of Sarawak*, i, 139, 291.

<sup>7</sup> Keane, *Ethnology*, 143.

<sup>8</sup> *Bombay Gazetteer*, xviii (1) 406; compare the Zulu custom, Featherman, *Nigritions*, 600.

<sup>9</sup> *Burmah Gazetteer*, i, 186; *Bombay Gazetteer*, xii, 95; Dalton, *loc. cit.*, 21; compare the custom of the Râjis, *North Indian Notes and Queries*, iii, 117.

<sup>10</sup> Croke, *loc. cit.*, i, 7; ii, 417.

the corpse on the ground as the funeral leaves the town or village; but here the rite often merges into a device for baffling the ghost.

In such matters conservatism is an active force, and we may suspect that the custom of corpse exposure prevailed more widely in former times when we find it to the present day applied to persons dying in a special state of taboo. Thus, the Savaras of Ganjam and the Mâles of Bengal deal in this way with persons dying from small-pox or snake-bite.<sup>1</sup> If one of the Madras Kâdirs dies in the forest, in other words, as they think, if he has fallen a victim to the angry jungle spirits, his corpse is placed in a crevice of the rocks and covered with stones.<sup>2</sup> Little children, again, are universally regarded as taboo because they have not undergone initiation, and hence all through Upper India their bodies are flung into water or exposed to animals. The same rule in some cases applies to priests who are under a permanent taboo. On the Northern frontier the corpses of such holy persons are cut in pieces and dispersed on the summits of mountains as food for birds, and the Pahariyas of Bengal simply leave the body of one of their Demanos or sorcerers under a tree.<sup>3</sup>

It seems to be generally admitted that in Europe inhumation preceded cremation and the latter seems to have arisen contemporaneously with the development of the potter's art. In India the course of development of custom appears to have been similar. The earlier Troglodytes buried their dead in the caves which formed their dwellings. Later on, the underground hut suggested cist and dolmen interment. The change in practice marks a new conception of the state of the dead, who no longer live in a gloomy underground world, but join their dead kinsfolk in the sky. The leading impulse may have been suggested by the greater mobility of some of the prehistoric races. As they abandoned their original settlements there may have arisen a natural desire to convey to a distant home the relics of the nobler dead; or, again, it may have been considered dangerous to leave such relics in a foreign land, because some evil-minded witch might work black magic by means of them. In fact, there is some evidence that these modes of disposal of the dead were racial peculiarities, inhumation being habitual to men of the long-headed type, while to the short-heads belongs the practice of incineration, following on that of contracted burial.<sup>4</sup>

In Europe inhumation seems to have lasted through the first two-thirds of the Neolithic Age, and in England and France various forms of interment seem to have co-existed with cremation, as was the case in the Homeric Age, when cremation, complete or partial, seems to have gone on side by side with inhumation.<sup>5</sup> "All the stages of such a transition can be seen in the Hallstatt burials at the dawn of the Iron Age in Central Europe: the Dipylon cemetery of the ninth

<sup>1</sup> Leman, *Ganjam*, 88; Risley, *loc. cit.*, ii, 59.

<sup>2</sup> Thurston, *Bulletins Madras Government Museum*, ii, 141.

<sup>3</sup> Cunningham, *Ladakh and Kunawur*, 188; Dalton, *loc. cit.*, 274.

<sup>4</sup> Borlase, *Dolmens of Ireland*, ii, 575.

<sup>5</sup> Borlase, *loc. cit.*, ii, 573; iii, 741 *seq.*; *Journ. Anthropol. Inst.*, O.S., v, 130, 132; iv, 128, 265; xxii, 7; xxvi, 255; Du Chaillu, *Viking Age*, i, 84 *seq.*; Nadaillac, *Prehistoric Peoples*,



century, or thereabouts, at Athens, shows inhumation in its older graves, incineration in its later. There are many instances of a corpse being inhumed, but its furniture and food supply burnt, and of the two practices long co-existing, though not being interchangeable in one community. The discrepancy, therefore, between the Epics and the remains of the great Mycenæan period in this respect also need be due to nothing more than a slight difference in their respective periods."<sup>1</sup>

The same modification of custom appears in Japan as well as in China. Here in the time of Marco Polo cremation was general, whereas it now survives only in the case of Buddhist priests.<sup>2</sup>

As for India—in the Vedas earth burial and cremation with subsequent burial of the bones and ashes are found to exist together, and in the period represented by the great Epics, the Mahâbhârata and Râmâyana, among the higher classes, at least, cremation with burial of the ashes or consignment of them to some sacred river seems to have entirely replaced inhumation.<sup>3</sup>

The same modification of custom has persisted up to our own times. Thus, among the tribes of the Hindu Kush cremation used to be the common form, the ashes being collected in rude wooden boxes or in earthen jars and buried.<sup>4</sup> Now Muhammadanism has taught them to bury the corpse, and this change of practice is, of course, common to all converts from Hinduism, one tribe in Northern India, the Gâras having, it is said, gained their name from their adoption of this novel custom.<sup>5</sup> Another line of similar influence is that of the Lingâyat worship in Southern India, which was the result of a reversion in the direction of phallic beliefs in opposition to official Brâhmanism. Thus the Ilgeru, a jungle tribe, tappers of the toddy-palm, in Dhârwar, used to cremate their dead, but quite recently under Lingâyat influence have reverted to cremation: the Khatik butchers when they become Lingâyats, bury, when Marhâtas following Hindu rules they burn their dead.<sup>6</sup> On the other hand, it is one of the first indications of a jungle tribe being adopted into the Hindu fold that they replace burial by cremation. The Komârpâiks, palm-tappers of Kanara, up to sixty or seventy years ago used to bury; now they cremate adults and bury children; and the Dhimâls, a menial race in Bengal, are rapidly replacing burial by cremation.<sup>7</sup>

Two lines of evidence tend to corroborate the conclusion that in India earth burial preceded cremation. One is, that now-a-days it is only the most backward of the jungle tribes, like the Irulas and Koravas of North Arcot,<sup>8</sup> who habitually resort to inhumation. It may also be assumed that the same rule prevailed in

372; Lubbock, *Prehistoric Times*,<sup>2</sup> 49 seq.; *Folk-lore*, iii, 246; vi, 15; Ralston, *Songs of the Russian People*, 324 seq.

<sup>1</sup> Hogarth, *Authority and Archaeology, Sacred and Profane*, 248; Frazer, *Pansanias*, v, 553.

<sup>2</sup> Yule, *Marco Polo*, i, 187; ii, 96; Rein, *Japan*,<sup>2</sup> 433.

<sup>3</sup> *Rig Veda*, x, 15, 14; 18, 11; i, 174, 7; x, 16, 1; 15, 14; Dutt, *Ancient India*, i, 279

<sup>4</sup> Biddulph, *loc. cit.*, 113.

<sup>5</sup> Crooke, *loc. cit.*, ii, 391.

<sup>6</sup> *Bombay Gazetteer*, xxii, 109; xxiii, 172.

<sup>7</sup> *Ibid.*, xv (1), 292; Risley, *loc. cit.*, i, 228.

<sup>8</sup> Cox-Stuart, *North Arcot*, i, 247, 249.



early times among tribes in the lower stage of culture in Northern India, because there is a consistent folk tradition dating from very ancient times that the dead were not cremated in the great kingdom of Magadha, the modern Bihâr.<sup>1</sup>

Another line of evidence pointing in the same direction is the general habit which now prevails of burying, not cremating, people under taboo—young children, *puerperæ*, priests and holy men of various kinds. As to children, the general rule seems to be that if a child die within the first twelve days after birth, or before the naming rite, which is a form of tribal initiation, it is always buried: if it die between the twelfth day and the third year, or between the naming rite and the hair cutting, which is also a form of initiation, it is buried, or if cremation be resorted to, there is no regular funeral ceremony or the recitation of sacred verses. The question of age also regulates the period during which the relations are impure or under taboo. Thus, if a boy die before the naming rite and the completion of teething, the parents are impure for only three days, and other members of the family for one day. If the body be buried, the parents are taboo for three days, while the other members of the family can purify themselves by bathing. These are the rules in Western India,<sup>2</sup> and with slight modifications generally prevail.

Again, following the same rule of taboo, those tribes which habitually cremate the adult dead bury those who perish by violent or unexpected deaths, by small-pox, cholera, or leprosy, and women dying in childbirth. Thus, in Coimbatore, persons dying of epidemic disease are invariably buried, not burnt, and if possible by the edge of water. Music is essential to an ordinary cremation, but it is not allowed in the case of those dying in an epidemic, "because the Amman (divine mother) would be offended."<sup>3</sup> The Raikaris, a forest tribe in Thâna, bury anyone who dies of cholera, by drowning, or suddenly without any apparent cause, while those perishing from protracted disease are cremated.<sup>4</sup> The Varlis, another tribe of the same class, bury all corpses that have sores on them, and cremate the others.<sup>5</sup> The popular explanation of the habit of burying those who die from epidemic disease is that the illness is the result of a special visitation of the disease godling, and that the spirit of the deceased accordingly does not require the purifying influence of fire to enable it to join its sainted ancestress. But this covers only a portion of the cases in which we find a reversion to the primitive habit of inhumation, and it is perhaps preferable to regard these as cases in which conservatism in ritual appears specially in connection with taboo. The Gadariyas, shepherds in Upper India, are so particular in enforcing the rule, that if those dying in a state of taboo be cremated, they suppose that such a noisome steam rises from the pyre as to blind the mourners.<sup>6</sup>

And so with the aged and respected dead. The Gonds are supposed to cremate all old men: in practice, to avoid mistakes, they burn all who die above

<sup>1</sup> *North Indian Notes and Queries*, v, 186.

<sup>2</sup> Nicholson, *Coimbatore*, 50.

<sup>3</sup> *Ibid.*, xiii (1), 182.

<sup>4</sup> *Bombay Gazetteer*, xviii (1), 562.

<sup>5</sup> *Bombay Gazetteer*, xiii (1), 176.

<sup>6</sup> Crooke, *loc. cit.*, iii, 364.

the age of fifty.<sup>1</sup> The Billuvas, toddy-drawers of Kanara, usually bury the dead, but cremate their Gurikars or headmen.<sup>2</sup> The Thârus of the Lower Himalaya bury their leading men in the house, and the Kâdus, jungle folk in Mysore, cremate adults and bury children.<sup>3</sup> The same rule applies to most classes of Hindu religious mendicants, who are buried either in salt or in a crouching position. But, as will have been seen, there is no permanence of custom: sometimes burial, sometimes cremation is regarded as honorific, the more unusual method being adopted in the case of the tabooed or respected dead. Thus, the Mahâdeo Kolis of Thâna cremate people who die suddenly or after a lingering illness and bury the others.<sup>4</sup>

We have seen that unmarried persons are taboo, and usually buried, not cremated. Marriage is regarded as a form of initiation: hence unmarried people are taboo and their ghosts are considered to be specially malignant.<sup>5</sup> The Brâhmanical explanation of this, adopted by the Banjâras of Northern India, is that married people by walking round the sacred fire at their wedding are thus dedicated to Agni, the god of fire; and should remain his at death.<sup>6</sup> The explanation is as valueless as such explanations usually are.

One method of removing the taboo in the case of the unmarried dead deserves notice. In Malabar an unmarried woman cannot be cremated until the Tâli, or marriage string, is tied round the neck of the corpse while it lies on the funeral pyre by some relation. Later competent authorities are inclined to doubt that the disgusting rites on this occasion, described by Abbé Dubois, really prevail.<sup>7</sup> The natives of South Malabar certainly marry all dead girls to a young Brâhman or to a cocoa palm, and this custom of *post mortem* marriage is recorded in the Russian province of Podolia as well as in China.<sup>8</sup>

One of the leading motives which regulate death rites is the desire to propitiate the ghost, which becomes offended at any ill-treatment of the corpse. *Sit tibi terra levis* is a common form of early monumental inscription, and the head is often specially protected from the pressure of the earth because it is the seat of life.<sup>9</sup> Hence probably arises the practice of what may be called shelf or niche burial. Thus, the Jogers, a tribe of vagrants in Bijapur, bury their dead in a shelf hollowed out on one side of the grave.<sup>10</sup> In the burial of a Jangama Lingâyat priest at Sholapur, after the grave is dug, a second hole is excavated in the bottom and facing it, either East or North, a niche is dug with an arched top. The whole is covered with cow-dung or whitewash, and the dust of the holy man's

<sup>1</sup> *Central Provinces Gazetteer*, 278.

<sup>2</sup> Sturrock, *S. Kanara*, i, 173.

<sup>3</sup> Risley, *loc. cit.*, ii, 318; Rice, *Mysore*, i, 213.

<sup>4</sup> *Bombay Gazetteer*, xiii (1), 172.

<sup>5</sup> Frazer, *Pausanias*, v, 389; Crooke, *Popular Religion and Folk-lore of Northern India*, i, 261.

<sup>6</sup> *North Indian Notes and Queries*, v, 143.

<sup>7</sup> Dubois, *Hindu Manners* (edited by Beauchamp), p. 17 *seq.*; Logan, *Malabar*, i, 128.

<sup>8</sup> *Bombay Gazetteer*, xv (1), 196; Ralston, *loc. cit.*, 310 *seq.*; *Folk-lore*, ii, 247; Yule, *Marco Polo*, i, 234; Gray, *China*, i, 216 *seq.*

<sup>9</sup> Frazer, *Golden Bough*, i, 187 *seqq.*

<sup>10</sup> *Bombay Gazetteer*, xxiii, 196.

feet thrown into it. The corpse is seated in the niche dressed only in a loin-cloth, and in the hands of the dead man is placed the Lingam amulet which he wore in life. The grave is filled up to the level of the face of the corpse, and a piece of gold is laid on the mouth. Finally, the main grave is filled up with earth and stones, and a mound is raised over it.<sup>1</sup>

Here we have a very primitive form of burial, because we find it among the degraded Yeravas of Coorg, who bury their women in a sitting posture in a hole scooped out sideways from what should have been an ordinary grave, so that the earth overhead does not touch her body.<sup>2</sup> The custom among the Jugis of Bengal, who, like all the ascetic classes, retain many primitive practices, is similar.<sup>3</sup> The custom extends far beyond India. Thus, some of the Australian tribes bury their dead standing, and an empty space is left above the head so that nothing may touch it; others make a side chamber at the bottom of the pit into which the tightly corded corpse is thrust.<sup>4</sup> We have numerous instances of the same practice among the Indian tribes of North America, and Miss Kingsley and other travellers describe somewhat similar customs in Africa.<sup>5</sup>

In fact, the custom is a link between the ordinary grave interment, where the earth is piled immediately over the corpse, and the dome or vault burial adopted by more cultured races. Thus, in Africa, one of the centres of shelf or niche interment, the King of the Fiot is placed in a vault with goods and images representing the fetish gods and officers of the deceased monarch.<sup>6</sup> It also reminds us of some of the ancient forms of Dolmen or Kistvaen burial, as in what are known as Camere tombs in Italy.<sup>7</sup> Many of the Irish megalithic monuments have an outer and an inner chamber, on the analogy of the Antae and Cella of classic shrines the outer room being probably devoted to some form of culture of the dead, and we find the same form in the beehive tombs of Mycenæ, where the inner chamber was probably the original tomb, and the outer room a charnel house for the bones of less honoured members of the royal family.<sup>8</sup>

Another interesting point in connection with this form of interment is that it has been adopted as the normal rule among Muhammadans. Thus, in India, in what is known as the "simple" (*sâdi*) grave, there is a Lahd or niche made in the base of the grave, arched over so that the dead man may be able to sit up when visited and examined by the death angels, Munkar and Nakir. In what is known as the *baghli* grave (*baghl* = the side or armpit) the niche is made in the side of the grave facing the Qiblah or holy city of Mecca. So in Turkestan the grave

<sup>1</sup> *Bombay Gazetteer*, xx, 84; xxiii, 237.

<sup>2</sup> Oppert, *Original Inhabitants of Bharatavarsa*, 207; quoting Richter, *Ethnographical Compendium of the Castes and Tribes of the Province of Coorg*, 9 seq.

<sup>3</sup> Risley, *loc. cit.*, i, 359.

<sup>4</sup> *Journ. Anthropol. Inst.*, O.S., ii, 271; xiii, 170

<sup>5</sup> Yarrow, *loc. cit.*, 97, 98, 102; Miss Kingsley, *West African Studies*, 484 seq.; Featherman, *Nigritians*, 233, 345, 549.

<sup>6</sup> Featherman, *loc. cit.*, 444.

<sup>7</sup> *Journ. Anthropol. Inst.*, xxvi, 259.

<sup>8</sup> Borlase, *loc. cit.*, i, 135, 147; ii, 432; Frazer, *Pausanias*, iii, 126, 141.

consists of a deep ditch in one end of which an underground chamber has been hollowed out into which the corpse is shoved and the grave filled.<sup>1</sup> It is difficult to conjecture whence the early Mussulmâns derived the practice; they probably merely perpetrated a general custom of the pre-Islamitic paganism.

It will have been noticed that in this shelf burial the corpse is usually interred in a crouched or sitting position. This, too, is a very primitive mode of interment, of which India supplies many instances. We find it among the Irulas, a very degraded jungle tribe of the Nilagiris; the Devânga, weavers of North Arcot: the Lepchas of Assam: the scavenger tribes of the North-Western Provinces and Bombay: the Hatkars of Berâr: the Madigs, vagrants of Bijapur: the Mhârs, a race of degraded outcasts in Western India: the Gidbudki, beggars of Kanara: the Dhor, menials in Bombay, and many other depressed and vagrant tribes, among whom it is the normal form of interment.<sup>2</sup> Besides actual crouched burial there are many cases in which the body is carried to the grave in a sitting posture. Thus, the Bhâradis, dancers of Ahmadnagar, carry the corpse to the burial ground rolled up in a bag: the Bilejâdars, weavers of Dharwâr, remove the married dead in a seated posture in a cart:<sup>3</sup> many of the Banya and other mercantile castes of Northern India convey the corpse to the cremation ground in a sort of cage in which it is bunched up like a ball.

This custom of crouched burial is widespread. It is characteristic of the interments in the Neolithic Age, and is common in the burrows of Great Britain and other parts of Europe.<sup>4</sup> Evidence of it has been traced in the royal burials at Mycenæ,<sup>5</sup> as well as in ancient Chaldæa.<sup>6</sup> In some of the early Irish entombments the corpse was seated in the grave on a chair, and the dead were buried in a crouched posture both in ancient Spain and in Scandinavia.<sup>7</sup> The custom seems to have been general in ancient times in North America, and prevails among the ruder races of that continent to the present time.<sup>8</sup> We find it in Rotuma and New Georgia, in the Gilbert Islands, among the Botocudos of Brazil, the Peruvians, Andamanese, and Nicobarese, the Australians, Fijians, and the people of New Britain, and Sarawak.<sup>9</sup> At Accra, the corpse of the dead man is

<sup>1</sup> Schuyler, *Turkistan*, i, 151.

<sup>2</sup> Grigg, *Nilagiris*, 217; Cox-Stuart, *North Arcot*, i, 227; Risley, *loc. cit.*, ii, 10; *North Indian Notes and Queries*, i, 118; *Bombay Gazetteer*, xviii (1), 439; xxii, 216; xii, 62; xviii (1), 435; xxiii, 157; xii, 173; xviii (1), 478; xxiii, 137, 201.

<sup>3</sup> *Bombay Gazetteer*, xvii, 170; xxii, 164.

<sup>4</sup> Borlase, *loc. cit.*, i, 112; Nadaillac, *loc. cit.*, 351; *Journ. Anthropol. Inst.*, O.S., xxii, 6; viii, 378; vi, 282; xii, 194; iv, 378; xx, 12; v, 146; *Folk-lore*, iii, 244.

<sup>5</sup> Frazer, *Pausanias*, iii, 106, 126.

<sup>6</sup> Maspero, *Dawn of Civilization*, 686.

<sup>7</sup> Borlase, *loc. cit.*, iii, 800; *Journ. Anthropol. Inst.*, O.S., xvii, 128; Du Chaillu, *Viking Age*, i, 70, 73, 326.

<sup>8</sup> Bancroft, *Native Races*, i, 205, 248, 289, 357, 396, 420; ii, 612, 800; Yarrow, *loc. cit.*, 75, 99, 111.

<sup>9</sup> *Journ. Anthropol. Inst.*, O.S., xxvii, 464; xxvi, 403; xiii, 208; vii, 499; ii, 281; xiii, 153, 298; x, 145; xii, 141; x, 365; xv, 450; xxi, 353; Roth, *loc. cit.*, i, 143 *seq.*; Featherman, *Nigritians*, 128, 242, 713.



seated, his name is called, he is invited to eat and drink, and implored not to forsake his friends.<sup>1</sup> In East Africa to this day children are cremated in a sitting position.<sup>2</sup> There are even instances in comparatively recent times of a similar custom in England, and to this day the Patriarch of the Coptic Church is burned sitting.<sup>3</sup>

Passing on to India—it is interesting to find that this custom is again closely associated with taboo, and is specially prominent in the case of ascetics and holy men. In the monasteries of Spiti in the Lower Himalaya, the traveller is shown masonry pillars which contain the bodies of abbots entombed in a sitting position dressed in their full canonicals.<sup>4</sup> When a Guru, or religious teacher, of the Shenvi Brāhmans of Kanara dies, his corpse is seated in a chair and worshipped, and in his chair he is seated in the grave; while in Northern India ceremonies of a similar kind are practised in the case of holy men of the Dādupanthi and Sannyāsi orders and many other classes of ascetics.<sup>5</sup>

The usual explanation of this custom of sitting or crouched burial is that it symbolises the prenatal posture in the womb. This, in some cases, perhaps explains the practice. In others it seems to be purely honorific—the chief is interred in the dignified position he adopted in life, the teacher in the attitude in which he addresses his pupils. Thus, among the Niam Niam and Wahuma of Western Africa, chiefs and men of rank are interred in a sitting position.<sup>6</sup> But in most cases it may merely be meant to suggest the posture in which the savage snatches uneasy sleep round the camp fire, or in his narrow cave or hut. He lives, in fact, in the grave as he lived on earth. And so in the passage graves of Scandinavia, the dead sit along the walls, young and old, men and women, the chin resting on both hands, and the knees drawn up, their favourite posture in life.<sup>7</sup>

With this mode of burial in some cases is connected the habit of binding up the corpse before interment. In Fiji this tying of the corpse is distinctly attributed to a desire to prevent the ghost from walking.<sup>8</sup> This feeling also accounts for the very common habit of mutilating dead enemies, and for the custom of burying the tabooed dead face downwards. The corpse is, thus, often bound up either with the intention of barring the return of the ghost, or to prevent it from being occupied by some evil spirit of the vampire type while on its way to the grave. In Turkestan, for instance, the corpse is tied round and round with a long bandage, and that of a Kimbondo chief is wrapped up in a hide.<sup>9</sup> We find the same custom

<sup>1</sup> Featherman, *loc. cit.*, 157, 713.

<sup>2</sup> *Journ. Anthropol. Inst.*, O.S., xxi, 368.

<sup>3</sup> 2nd Series, *Notes and Queries*, ix, 513; 3rd Series, i, 38; iii, 264; 7th Series, viii, 158.

<sup>4</sup> *Settlement Report*, 204.

<sup>5</sup> *Bombay Gazetteer*, xv (1), 149 *seq.*; xx, 184; xii, 62; xxiii, 237; *Punjab Notes and Queries*, ii, 20; iv, 51; Risley, *loc. cit.*, ii, 342.

<sup>6</sup> Featherman, *loc. cit.*, 24, 116.

<sup>7</sup> Du Chaillu, *loc. cit.*, i, 73; compare Bancroft, *loc. cit.*, i, 205; Yarrow, *loc. cit.*, 146.

<sup>8</sup> *Journ. Anthropol. Inst.*, O.S., x, 145.

<sup>9</sup> Schuyler, *loc. cit.*, i, 150; Featherman *loc. cit.*, 470.



among many tribes of American Indians, among Australians, and in Hispaniola, while in Mashonaland the limbs of the male dead are tied up, toes and fingers each in a separate piece of cloth before burial, while a woman is bound up in a hide.<sup>1</sup> In other cases we find an advance of custom, as among the Aleuts and Peruvians, in Australia and ancient Egypt, where the corpse or mummy is enveloped in ornamental netting.<sup>2</sup>

In India similar customs are common. Thus, the Havig Brâhmans of Kanara tie the corpse tightly to the bier with a coir rope: the Deshasth Brâhmans of Bijapur, obviously in a spirit of religious conservatism, which shows the antiquity of the practice, require that this rope should be cut with a stone, the apparent intention being to give the ghost release when the funeral reaches the place of cremation: the degraded Mhârs of Khândesh tie the arms over the breast with a silver wire: the Burmese tie the great toes of the corpse, apparently to prevent the ghost from walking, and swathe the body in an ample shroud: the Mangars, a menial tribe in Bengal, tie it with three pieces of rope to a pole and thus convey it to the grave: some of the tribes in Burmah combine this custom with the common rite of hair sacrifice at death, and use the hair of the dead man's son or daughter to tie his corpse: if this hair be not forthcoming, strips of cotton cloth are used.<sup>3</sup>

Another remarkable custom is that of disinterring the dead after decomposition has wholly or partly ceased, cleaning his bones and either wearing them as relics or consigning them to an ossuary. This practice is common in India in the case of persons dying in a state of taboo, in other words from epidemic disease. The corpses of such people are constantly disinterred and reburied when the plague is over. Thus, the Kâthkaris, a jungle tribe in Kanara, bury those dying of cholera, exhume them when the epidemic has ceased, and burn the bones.<sup>4</sup> A more remarkable development of the same custom is found among the Eastern Kullens of Madras, who, sometimes after a corpse has been buried, bring a bier to the grave. The brother of the widow of the deceased digs up the body, removes the skull, which he washes and smears with sandalwood powder and spices. This man, whose relation to the deceased is an indication of the matriarchate, is seated on the bier, and holding the skull in his hands is carried to a shed erected in front of the dead man's house. The skull is set down and all the relations mourn over it till the next day at noon. The following twenty-four hours are given over to drunken revelry. Then the brother-in-law is again seated on the bier, skull in hand, and is carried back to the grave. The son or heir of the deceased then

<sup>1</sup> Featherman, *loc. cit.*, 21; *Journ. Anthropol. Inst.*, O.S., xiii, 190; xiv, 363; xxiv, 170; xvi, 277; xiii, 418; xix, 402; Bent, *Ruined Cities*, 264; Bancroft, *loc. cit.*, i, 245; Shea-Troyer, *Dabistan*, i, 141. For rites originating from burial in hides, see Lefébvre, *Proc. Society of Biblical Archaeology*, xv, 433 *seqq.*

<sup>2</sup> *Journ. Anthropol. Inst.*, O.S., x, 365.

<sup>3</sup> *Bombay Gazetteer*, xv (1), 127; xxiii, 88; xii, 118; *Burmah Gazetteer*, i, 385, 386; Risley, *loc. cit.*, ii, 75.

<sup>4</sup> *Bombay Gazetteer*, xiii (1), 163; xiv, 264.

burns the skull and breaks an earthen pot, apparently with the object of releasing the ghost. This custom prevails also among the Pullers, one of the most primitive races in that part of the country.<sup>1</sup>

Among other tribes which practise inhumation similar customs are found. The Agariya of Central India, a race of iron-smelters in the jungle, dig up their dead when the bones are dry and send the skull and chief parts to the Ganges.<sup>2</sup> The Bhotiyas who die except in the month of Kârtik, or December, are disinterred in the following Kârtik and burnt, as in Russia the bodies of unknown or uncared for dead are buried hastily in winter, disinterred in the spring and reburied.<sup>3</sup> Similar practices are recorded among the Tlinkeets of Western America, and the Latukas of East Africa.<sup>4</sup>

It is needless to say that the custom of disinterring the corpse and cleaning the bones is common to many savage races. The practice prevails in Motu, in Goazacoalco, in Melanesia, Sarawak, the Loochoo Islands, Torres Straits, Ashanti, and many other places.<sup>5</sup> The custom of maintaining tribal ossuaries is equally common.<sup>6</sup> The Todas have what are called "the green" and "the dry" funeral, the former carried out immediately after death, the latter, which is now fixed at about a twelvemonth after death, when the obsequial rites of all who have died in the interval are performed.<sup>7</sup> It may be suspected that the Todas, who now cremate, once buried their dead, and that "the dry" funeral marked the time for the removal of the bones to the tribal ossuary. The same custom also possibly accounts for "the small" and "great" festival of the dead among the Azteks.<sup>8</sup>

In fact, the custom may have suggested the special death rites, which, as among the Hindus, are performed on the anniversary of the death. They have invented the fiction that during this period the ghost wanders, and will continue to wander unless by the pious care of his relations he is provided with a new and spiritual body. The period of a year probably marks the period at which it was supposed that decomposition was complete. The Indians of North America, for instance, make gifts at the grave so long as it is supposed that there is any part of the perishable matter remaining, and the Dakotas inter the bones in about a year after they have been placed on the platform.<sup>9</sup> The soul, it was believed, could not rest in peace so long as it was surrounded by the products of corruption. As the

<sup>1</sup> *Folk-lore*, v, 36. For other cases in which the skull represents the deceased, see Hartland, *Legend of Perseus*, ii, 307 seq.

<sup>2</sup> Dalton, *loc. cit.*, 323; Risley, *loc. cit.*, i, 4.

<sup>3</sup> Traill, *Statistical Report on the Bhotiya Mahâls*, 85 seq.; Ralston, *Songs of the Russian People*, 333.

<sup>4</sup> Bancroft, *loc. cit.*, i, 113; Featherman, *Nigritians*, 81.

<sup>5</sup> *Journ. Anthropol. Inst.*, O.S., vii, 485; x, 300; xxiv, 58; xix, 416, 421, 427, 436; xiv, 231; xxv, 357; xv, 397; xiii, 13. Gray, *China*, ii, 304; and see Hartland, *Legend of Perseus*, ii, 327.

<sup>6</sup> Bancroft, *loc. cit.*, iv, 776; Burckhardt, *Syria*, 564; Featherman, *Nigritians*, 153; and see Hartland, *loc. cit.*, ii, 332.

<sup>7</sup> Marshall, *A Phrenologist among the Todas*, 170 seq.; Grigg, *Nilagiris*, 197.

<sup>8</sup> Bancroft, *loc. cit.*, ii, 618.

<sup>9</sup> Schoolcraft in Drake, *Indian Tribes of the United States*, i, 216, 234.

Dayaks of Borneo say, "All unknown and unexpiated sin is wiped away by the burning of the bones, and then the spirit is as clean as though washed in gold."<sup>1</sup> The annual death rite of the Hindus may then be a survival of practices antecedent to the adoption of cremation.

But we may go even further and conjecture that this habit of disinterring the bones is a survival of a more primitive and more disgusting rite. In its crudest form we find it among the tribes of the Amazon, who, according to Dr. Wallace, about a month after the funeral, "disinter the corpse, which is then much decomposed, and put it in a great pan or oven over the fire till all the volatile parts are driven off with a most horrible odour, leaving only a black carbonaceous mass, which is pounded into a fine powder, and mixed in several large *couchés* (vats made of hollowed trees) of a fermented drink *caxiri*: this is drunk by the assembled company till all is finished: they believe that the virtues of the deceased will be transmitted to the drinkers."<sup>2</sup> The practice then in its crudest form carries us back to the rite of sacramental cannibalism.

We meet many traces of this practice of disinterring the bones in early European interments. In some of the English long barrows the bones appear to have been flung in pell-mell. The space is often too small to hold a complete corpse, so that before inhumation the flesh must have been separated from the bones, or the bodies were disinterred and reburied when decomposition had ceased. Instances of this are found in connection with many of the megalithic monuments.<sup>3</sup>

In modern Hinduism of the higher type the rite survives in the *Asthi-Sancaya*, or "bone collecting ceremony," when a day or two after cremation the bones and ashes are swept up and buried there and then, or reserved for consignment to some holy river.

Lastly, in dealing with these survivals of early burial rites in India we come to the custom of jar and urn burial. I quote in the appendix to this paper a valuable note on the subject, hitherto, I believe, unpublished, by the late eminent antiquary, Bishop Caldwell.

Practically the only instances of this form of interment come from Southern India. In Salem, "the large urns invariably contain human bones and small vessels, and very often some urn implements and ornaments. I do not think that any of them are large enough to contain the body of a full-grown man, though placed in a sitting posture, with the legs and thighs drawn up, as is sometimes found in the tumuli of Europe:" in fact the position of the bones in layers seems to indicate that the body must have been either cut up or partially burnt before interment.<sup>4</sup> In Tinnevely the ancient race used to bury their dead in earthen

<sup>1</sup> Roth, *loc. cit.*, i, 163.

<sup>2</sup> Wallace, *Narrative of Travels on the Amazon*, 346: with other references in Hartland, *loc. cit.*, ii, 286 *seq.*

<sup>3</sup> Nadaillac, *loc. cit.*, 214, 346; Borlase, *loc. cit.*, i, 188; ii, 453, 456.

<sup>4</sup> Le Fanu, *Salem*, ii, 284; Nicholson, *Coimbatore*, 85.

urns, varying in size from a foot to six feet in height. In them skulls and bones are often found in a complete state of preservation, the body being placed in the urn in a sitting posture, or, when the urns are small, still more forcibly fitted to its size.<sup>1</sup> In Malabar, again, we find curious burial caves, probably of the same age as the megalithic monuments: some are of a later type, containing large sepulchral urns.<sup>2</sup> In Nellore, in the laterite deposit, were found several coffins, apparently made of burnt clay, embedded in quartz. Some contained more than one body, spear-heads, and other implements.<sup>3</sup> Some of the urns in Malabar have a hole in the bottom, which, it has been supposed, may be connected with the cult of the earth goddess and the return of the person buried to the bosom of mother earth:<sup>4</sup> more probably they were intended merely as outlets for the products of decomposition on the principle already mentioned that it was desirable to purify the bones so as to provide a happy home for the ghost. In Mysore, jars of the same kind have been found in the Kistvaens, and in South Arcot there are cases of pot burial in stone chambers, the jars containing bones and fragments of iron.<sup>5</sup> In Malabar, again, jars and fragments of iron have been found in cromlechs.<sup>6</sup> In the Nilagiris, funeral jars have been found with lids curiously shaped in the form of animals, such as birds, pigs, deer, dogs, horses, buffaloes, trees, men, and women, while in the barrows bones are found in a bronze vessel enclosed in an earthen jar.<sup>7</sup> The jar in Malabar is often buried with its lid on a level with the surface of the soil, and the whole covered with a massive slab of stone.<sup>8</sup>

Jar burial is thus a well-established form of interment in Southern India. From the articles discovered with the bones they would, in most cases, seem to be not earlier than the discovery of iron. How long ago that may be or to what race the custom may be attributed, it is at present difficult to say. It seems to have gone on continuously up to quite recent times. Probably in some cases the corpse was cut up or dislocated and thus forced into the jar: in other cases cremation, either complete or partial, preceded the placing of the bones in the jar: or possibly the jar may have been used occasionally for bones disinterred some time after inhumation.

This early custom of urn burial has left some survivals in the current Hindu death ritual. In the first place, the potter as the maker of the shrine or spirit house which contains the ghost, is subject to many taboos, and among certain of the lower castes discharges priestly functions. The household water pots are, again, subject to a rigid taboo. After a death they are all broken or replaced, because the ghost may have found its natural home in one of them, and all must be broken that the restless spirit may be released. So when the mourner marches round the pyre he breaks with the life-stone, which is supposed to represent the

<sup>1</sup> Stuart, *Tinnevelly*, 67.

<sup>2</sup> Boswell, *Nellore*, 689.

<sup>3</sup> Rice, *Mysore*, i, 507; Garstin, *South Arcot*, 330 seq.

<sup>4</sup> Logan, *loc. cit.*, i, 180.

Grigg, *Nilagiris*, 233, 235 seq.

<sup>5</sup> Logan, *Malabar*, i, 180.

<sup>6</sup> Logan, *loc. cit.*, i, 181.

*Journ. Anthropol. Inst.*, xi, 416.



dead, a water pot with the same intention, and a water jar is hung on the sacred Pipal tree for some time after death to provide a home and refreshment for the homeless spirit. The line of pots piled during the marriage rite is supposed to be the home of the guardian deities who bless the union, and a Kalasa, or sacred jar, is found at every rural shrine and on the spires of Hindu temples, because it is distinctively the abode of the deity. This leads to a great chapter in folklore, the binding of a god in a jar, which I have discussed elsewhere.<sup>1</sup>

Though the habit of actual jar burial has practically disappeared in the northern part of the Continent, it has left many traces of its existence. All over Northern India dead babies, because they are specially taboo, are put away in jars. In the Panjâb, among the tribes which practice infanticide, the body of the child is placed in a water-pot and buried. The same vessel is used as the place of deposit for the umbilical cord, to which many curious beliefs attach, all based on the belief that it acts as the Life Index, or refuge for the separable soul of the child. More important is the use of the jar for holding the bones and ashes collected from the cremation ground. Here it directly represents the jar used in earlier times for purposes of inhumation, and we can see the exact stages of the evolution of custom in practice at Siam, where the corpse of a king or queen is placed, dressed and ornamented, in a golden jar, and cremated some four or five months afterwards.<sup>2</sup>

In the disposal of the bones and ashes many variances of practice present themselves. Some, and in particular those tribes which follow most closely the primitive usage, bury the jar in the place where the corpse was cremated, the cremation being here an obvious supplement to the more early use. Others combine it with water burial and bar the return of the ghost by sinking the bone jar in the nearest running water, or reserve it for removal to the Ganges or some other sacred stream. Meanwhile, and during the journey, the jar is hung on a tree, so that the ghost, if so disposed, may revisit its bones, for all ghosts are subject to a rigid taboo, not to tread upon the earth. Others, like the Gâros of Assam, place the ashes in a jar and enclose it with a bamboo fence near the village, so that the ghost may abide with them as some North American tribes and savages in many parts of the world enclose the grave with a pen of sticks and logs to prevent intrusion on the home of the dead.<sup>3</sup> Some, like the Khasiyas, on a special day selected by the diviner, remove this jar to the tribal burial ground, where the dead man rejoins his relations; or, like the Orâons, hang the bone jar on a pole outside the house of the deceased, and in the next December or January bury it near a river or tank, covering the remains with a massive stone.<sup>4</sup> Here, too, the delay in disposing of the bones may be a survival of customs connected with the earlier rite of inhumation. Hence, also, the jar is naturally a sacred object, and in

<sup>1</sup> *Folk-lore*, viii, 325 *seqq.*

<sup>2</sup> Bowring, *Siam*, ii, 419.

<sup>3</sup> Hunter, *Statistical Account of Assam*, ii, 354; Dalton, *loc. cit.*, 56; Yarrow, *loc. cit.*, 79, 80, 141.

<sup>4</sup> Risley, *loc. cit.*, ii, 174 *seq.*

Bihâr to strike one with a jar, or even to threaten to do so, is the most extreme form of insult.<sup>1</sup>

But there are survivals of even ghastlier customs in connection with the form of interment. Many of the primitive burials, as we have seen, supply evidence that the corpse, before being deposited in the jar, was dismembered, because the mouth of the vessel was too narrow to admit it. The Dayaks at the present day sometimes evade this difficulty by cutting the jar in two, through the middle, in order to permit the entry of the body, the upper part serving as a lid; while in ancient Chaldaea the clay must have been modelled over the corpse, or the neck subsequently added to the jar.<sup>1</sup>

In the light of facts such as these, it is significant that popular rumour credits the Doms, the lowest class of vagrants and scavengers in Upper India, with the habit of dismembering the corpses of their dead at night and placing the fragments in jars, which they sink in some stream or reservoir.<sup>2</sup> Mr. Risley is inclined to doubt the truth of this story, and suggests that it was based on the common prohibition against these outcasts burying their dead by daylight. But the tradition may not be so improbable as it seems, and it occurs just among the very tribe where we might have expected to meet with a survival of practices such as this.

I have thus sketched some of the early methods of disposal of the dead in India, of which survivals more or less obvious may be traced in the current usages of the present day. But I have been able to touch only the fringe of a subject in which the evidence is very voluminous and intricate. I have perhaps said enough to show that in any discussion of the evolution of the methods for the disposal of the dead the prehistoric and contemporary evidence from the Indian Peninsula and its border lands cannot safely be ignored.

<sup>1</sup> *Journ. Anthropol. Soc., Bombay*, iii, 365.

<sup>2</sup> Roth, *loc. cit.*, i, 152; Yarrow, *loc. cit.*, 137; Maspero, *loc. cit.*, 684

<sup>3</sup> Risley, *loc. cit.*, i, 248; Crooke, *loc. cit.*, ii, 325; compare Borlase, *loc. cit.*, ii, 456.

## APPENDIX.

## SEPULCHRAL URNS IN SOUTHERN INDIA.

The following note by the late Dr. Caldwell, Bishop of Tinnevely, and author of the *Grammar of the Dravidian Languages*, has been kindly placed at the disposal of the writer of this paper by Mrs. Athol Macgregor and deserves reproduction.

"I am anxious to obtain some information as to the extent of the area within which sepulchral urns, like those to which I am about to refer, are found.

"The urns I refer to are large earthenware jars, containing fragments of human bones, generally in a very decayed state. They are of various sizes, corresponding with the age of the person whose remains were to be disposed of. The largest I have found was 11 feet in circumference, and the smallest have been between 4 feet and 5 feet. The shape varies a little within certain limits, so that I have not found any two perfectly alike: but the type generally adhered to is that of the large earthen jars (in Tamil *Kūnai*) with which the people in this neighbourhood draw water from wells for their cultivation. The urn is without handles, feet, rim, or cover. It swells out towards the middle and terminates in a point, so that it is only when it is surrounded with earth that it keeps an upright position. The urns do much credit to the workmanship of the people by whom they were made, being made of better tempered clay, better burnt and much stronger than any of the pottery made in these times in this part of India. They would contain a human body easily enough in a doubled-up position, if it could be got inside; but the mouth is generally so narrow that it would admit only the skull; and one is tempted to conjecture that the body must have been cut into pieces before it was put into the urn, or that the bones must have been collected and put in after the body had decayed. Generally decay is found to have advanced so far that these theories can neither be verified nor disproved. Fragments only of the harder bones remain, and the urn seems to contain little more than a mass of earth. In one instance I found the bones partially petrified and therefore almost perfect, though they had fallen asunder, but this was the large 11 feet urn referred to above, discovered at Korkoi; so that in this instance it was conceivable that the body had been placed in it entire. At Ilanji, near Courtallum, on opening an urn some traces of the shape of a skeleton were discovered. The skull was found resting on the sternum, and on each side of the sternum was a tibia. It appeared, therefore, as if the body had been doubled up and forced in head foremost, though it was not clear how the shoulders could have got in. The bones were of the consistence of ochre, and crumbled to pieces when they were taken out. Nothing could be preserved but a piece of the skull and the teeth, which were those of an adult. Dr. Fry, Surgeon to the Resident of Travancore, who was present at the find, pointed out that the molars had been worn down by eating grain, and that the edges of the front teeth had also been worn down by biting some kind of parched

pulse. Afterwards, on examining the mouths of some natives, I found their front teeth worn down a little in the same manner, and, as they admitted, from the same cause. I have not noticed any distinct trace of the bones in these urns having been calcined.

"In addition to human bones, a few small earthen vessels are found in most of the jars. Sometimes such vessels are arranged outside, instead of being placed inside. These vessels are of various shapes, all more or less elegant, and all appear to have been highly polished. At first I supposed they had been glazed, but I have been informed by Dr. Hunter, late of the Madras School of Arts, that what I noticed was a polish, not a true glaze. Whatever it be, I have not noticed anything of the kind in the native pottery of these parts and these times. In some cases the polish or glaze is black, and the decay of these blackened vessels seems to have given rise to the supposition that the bones had sometimes been calcined.

"On a plate published in the *Indian Antiquary* for October, 1877, are sketches of five of these little vessels. When these have been shown to natives, they say that No. 4 seems to have been an oil-vessel, and No. 5 a spittoon. The use of No. 2, the vessel with the lid, is unknown. In these times such vessels would be made of bell-metal, not of pottery. We may conclude that the object in view in placing these vessels in the urn was that the ghost of the departed might be supplied with the ghosts of suitable vessels for eating and drinking out of in the other world. Small stones, about the size of a cocoa-nut, are generally found heaped up round the mouth of the urn, and the discovery of such stones ranged in a circle, corresponding to the circular mouth of the urn, will be found to be a reason for suspecting the existence of an urn underneath.

"The natives of these times know nothing whatever of the people by whom this singular mode of interment was practised, nor of the time when they lived. They do not identify them with the Samanas, that is to say, the Jainas and the Buddhists lumped together, about whom tolerably distinct traditions survive, nor does there appear to be anything in or about the jars distinctively Jaina or Buddhistic. There is a myth current among the natives, it is true, respecting the people who were buried in these jars, but this myth seems to be merely a confession of their ignorance. They say that in the Treta Yuga, that is about a million of years ago, people used to live to a great age, and that however old they were they did not die, but the older they grew the smaller they became. They got so small at length that to keep them out of the way of harm it was necessary to place them in the little triangular niche in the wall of a native house, in which the lamp is kept. At length when the younger people could no longer bear the trouble of looking after their dwarf ancestors, they placed them in earthen jars, put with them in the jars a number of little vessels containing rice, water, oil, etc., and buried them near the village.

"The name by which these urns are called in the Tamil country does not throw much light on their origin. This name assumes three forms. In the Tamil



Dictionary it is *madamadakkattáli*. A more common form of this is *maddamadakkan-dáli*, the meaning of both which forms is the same, viz., 'the *táli* or large jar, which boils over.' The meaning attributed to this by some natives is rather far-fetched, viz., that the little people who were placed in them used sometimes to come out of the jars and sit about, as if they had boiled over out of them. The form of this word in use among the common people seems capable of a more rational interpretation. This is *madamattan-dáli*, or more properly *madonmattan-dáli*. *Madonmatta* (Sansk.) (? *madvanmata*) means 'insane'; but it is sometimes used in Tamil to mean 'very large,' as in the Tamil version of the Panchatantra where it is used to denote a very large jungle. The great size of the urn being its principal characteristic, it would seem that the name in use amongst the common people is, after all, better warranted than that which is used by those who are regarded as correct speakers.

"Who the people were who buried their dead in these urns is a problem yet unsolved. The only points that can be regarded as certain are those which have been ascertained by the internal evidence of the urns and their contents themselves. From this it is clear that the people buried in them were not pygmies, but of the same size as people of the present time. How they were put in may be mysterious, but there is no doubt about the size of their bones. The skulls were similar to those of the present time. The teeth also were worn down like those of the existing race of natives, by eating grain. In a jar opened by Dr. Jagor of Berlin, a head of millet was found. The grain had disappeared, but the husks remained. The unknown people must have lived in villages, the jars being found, not one here and another there, but arranged side by side in considerable numbers, as would naturally be done in a burial-ground. They were also a comparatively civilised people, as is evident from the excellence of their pottery, and the traces of iron implements or weapons which have sometimes been found in the jars. The conclusion from all this which seems most probable to me is that they were the ancestors of the people now living in the same neighbourhood. If this were the true explanation, it is singular that no relic, trace or tradition of such a mode of sepulture has survived to the present day. And yet, if we were to adopt the supposition that they were an alien race, it would be still more difficult to conjecture who they were, where they came from, and why they disappeared.

"I have myself seen those urns both in the Tinnevely and Madura districts and in northern and southern Travancore—that is, on both sides of the Southern Ghâts, and I am anxious to ascertain in what other districts of India they are found. If the area within which they are found can be accurately traced some light may thereby be thrown on their history."

#### DISCUSSION.

Mr. W. GOWLAND said he had hoped to find in the Indian burial customs, which had been so ably dealt with by Mr. Croke, some parallels with those practised in



Japan and Korea in early times. They were not altogether absent, but were confined solely to Buddhist times, which, in Japan, only dated from the sixth century of our era. The exposure of the dead in waste places to be devoured by beasts of prey, or to be destroyed by the action of the elements, as mentioned by the author, is certainly recorded in the traditions of the Japanese as being the earliest practice of the race, but how far these records are trustworthy on this point it is impossible to say, and we have no proofs, nor can we have any, that such a custom was actually followed.

The first mode of burial, of which we have any evidence, is that which was practised by them in those remote times when they first migrated from the mainland of Asia, viz., interment in low mounds or burrows. In these mounds stone ornaments are found, but the weapons, swords, halberds, and arrow heads are of bronze. Somewhat later in time, burial in dolmens, or large megalithic chambers covered by mounds, was introduced. In these the characteristic weapon was a formidable iron sword. These dolmens, however, have nothing in common with those of India. As regards the methods, mentioned by the author, in which the object was to preserve the body, he would point out that mummification was unknown in Japan, but, in very early times, vermilion was frequently placed in the sarcophagus with the body. He had found this substance in several sarcophagi, and in one large tumulus of a forgotten emperor or prince, which had been rifled, a considerable quantity was disseminated through the earth where the interment had taken place. It was generally stated by Japanese archaeologists that the vermilion was used in order to preserve the corpse from decay. He did not think, however, that it could have this effect, but that there was some other reason for its use which was not obvious. He might mention incidentally that the custom of embalming is practised by the Chinese at the present day, in the cases of persons who had died in a distant country. The body was then embalmed in order that it might be transported to the native province of the deceased for interment there.

As regards inhumation, this mode of burial alone was practised by the Japanese in early times. Cremation was unknown until it was introduced with Buddhism, and it was not until about the seventh century, when that religion had been established in the country, that it seems to have come into use.

The first of the imperial line to be cremated is said to have been the Empress Jito (A.D. 702). There is some doubt about this, but the body of the Emperor Junna, who died in A.D. 842, was undoubtedly cremated. In these early cremations of important persons, it is important to note that the body was not burnt near the burial mound. Thus in the case of the Emperor Junna, the cremation took place about three miles from the tumulus proper; and in all cases two mounds commemorated the death, one being erected on the actual spot where the cremation was carried out, and the other where the urn containing the ashes was buried.

Inhumation was not given up but still continued to exist side by side with cremation, especially in burials of followers of the Shinto cult, and both are practised at the present day.

No traces of the custom of crouched burial in early times have been found in Japan, but after the introduction of cremation, the bodies of the dead were usually

placed in a squatting position in the wooden coffer or tub in which they were placed on the funeral pile.

Burial in jars, mentioned by the author as confined to Southern India, was occasionally practised in Japan, but only during the last two or three centuries. In one example he had found, when excavating for the foundation of a building in extending the mint in Ôsaka, the body, which was that of a priest, had been interred in a large earthenware jar, the top of which was closed by a slab of stone bearing the date of the interment. The size of the jar and the width of its mouth were amply sufficient to admit the body without mutilation.

Finally, it is noteworthy, from what has already been said, that the only ancient burial custom which Japan owes to India was cremation.

Mr. W. L. H. DUCKWORTH thought that one effect of Mr. Crooke's researches would be to diminish the value to be attached to the consideration of identity in the method of disposal of the dead, as evidence of racial identity. In the case of the so-called Mediterranean Race in particular, a good deal of stress has been laid on this criterion by Sergi and others.

## SEQUENCES IN PREHISTORIC REMAINS.

BY PROFESSOR W. M. FLINDERS PETRIE, D.C.L., LL.D.

[WITH PLATES XXXI TO XXXIII.]

THE conveniently vague term, "prehistoric," has been generally thought to excuse our ignorance, and to render further inquiry needless because it would be inconclusive. To attain to a broad division into widely distinct periods and styles, such as palæolithic and neolithic, was perhaps a tolerably safe venture; but the utmost that has been yet attempted is a division into a few well-marked varieties, as Mousterien, Acheullien, etc., or Mykenæan, Dipylon, Hallstattian, etc., for later ages. It has been, perhaps, the result of careless and incomplete observation and registration of discoveries, that the habit has arisen of defining only large periods without subdivisions, and describing a period by the name of a locality, which conveys no idea of relation to other periods.

But it may be said that in dealing with ages before any written record of years no reference to time or dates is possible. In the narrowest sense this may be true. Yet the main value of dates is to show the sequence of events; and it would matter very little if the time from Augustus to Constantine had occupied six centuries instead of three, or if Alexander had lived only two centuries before Augustus. The order of events and the relation of one country to another is the main essential of history. Indeed, the tacit commonsense of historians agrees in treating the periods of great activity and production more fully than the arid ages of barbarism, and so substituting practically a scale of activity as the standard rather than a scale of years.

It would be, therefore, no fallacy to portion out the past by the ratio of events rather than by the seasons; and to measure history by the stages of thought and action of man rather than by inanimate celestial motions. In this truest sense, then, we may have a possibility of reducing the prehistoric ages to a historical sequence, and defining them as readily as historic times. If some scale and ratio of human activities can be adopted, we may measure the past by means of it as definitely as we do by years B.C.

Supposing our information were complete, it is clear that we might, for instance, assign one degree in an arbitrary scale for every hundred objects of man's past that have survived to our time, and so obtain a reasonable series of "sequence dates"—as we may call them—for any period hitherto unmeasured. Such sequence dates would have varying relation to a scale of years in different parts of the scale, but would be, at least, a reasonable system of denoting the past, which would give that power of exact expression in commonly understood terms, which is

the necessary basis of any scientific treatment. The sequence dates of one country would have to be correlated to those of another country by discoveries of connections; but it would at least be a great gain to be able to express such a relation in a simple system of dating instead of some elaborate definition of a period named from one place being equivalent to the earlier or later part of a period named from some other.

So far we have only been looking at the desirable, without any statement of the practical; and sequence dates in prehistory may seem to be merely a "pious wish." Yet this abstract view of the matter has arisen from a very practical treatment of a large mass of material, out of which it has grown.

The most practical scale of sequence dates in Egypt, and perhaps in most other prehistoric civilisations, is the proportion of burials. The number of burials in each century will, of course, vary with the population; yet so does the importance of a country vary, and also our interest in it, to some extent. Nothing can be so readily ascertained as the proportions of burials if our researches are fairly spread, and if we find each cemetery to be largely overlapping others in relative age. For the period covered by a series of overlapping cemeteries the number of tombs may be taken as a most rational basis of sequence dates. Thus each unit of dating represents an equal number of persons above a certain low standard of wealth and culture. If, then, we could treat a large number of tombs—a thousand or more—which had no blank periods between them, and arrange them in their original order, we should have a rational basis for sequence dates; they might be divided into units of twenty tombs, for instance, and so broken up into fifty equal divisions; then any fresh tomb like some other in the scale could be simply and exactly defined as being of some sequence date, such as 23 or 38, as the case might be.

Further, every product could be dated in its relation to others, by saying that it began in, say, 18 S.D. and went out in 25 S.D. This would be just as valuable for a relative history of a civilisation as being able to write 5400 to 4800 B.C. for the age of some weapon or ornament. This result is what we have actually attained from such an amount of material as I have suggested above; and this system is from no abstract view, but has been really worked out. I now turn to the methods for extracting such results.

The first step is to form a *corpus* of drawings, each class of objects by themselves. For practical purposes it is well to work only from pottery to begin with; for it is less likely to be intentionally copied from earlier examples than work which is in more valuable material, and it is much less likely to be handed down from generation to generation than are the weapons of metal or carving in hard stone. In countries where pottery is insufficient, in variety or quantity, then other objects must be taken into consideration. It seems best in such a *corpus* to denote each class of pottery or objects by a letter (an initial letter of the class, if possible); and then all the forms by numbers added to that letter, as H 16 for the hanging stone vase No. 16, D 73 for the decorated pottery No. 73.



It is preferable to spread all the types over not more than 99 numbers in each class so as to avoid three figures; where there is much difference between types one or more numbers may be left blank for marking later discoveries of intermediate forms; where there are many subvarieties of a type letters may be added, as P 28a, P 28b, P 28c; thus if the type cannot be exactly distinguished, P 28 alone can be used for it. The *corpus* of prehistoric Egyptian pottery contains 917 forms.

Having, then, a full *corpus*, numbered in a systematic order, the contents of every grave should be registered in this notation. And then a card catalogue of graves should be made, each grave-group being written on a narrow slip  $\frac{1}{4}$  inch wide. Practically the slips are best ruled in columns for different classes of pottery; each column wide enough to take in the number of types in any one grave. Actually the slips are 7 inches long, ruled in ten columns, for the prehistoric Egyptian. About 900 slips have been used together, representing the best graves selected from among over 4,000.

The next work is to place these as far as possible in the original order of the graves. For this there are five methods, based on the following considerations:—

- 1st. Actual superposition of graves or burials; but rarely found.
- 2nd. Series of development or degradation of form; very valuable if unimpeachable.
- 3rd. Statistical grouping by proportionate resemblance; the basis for classifying large groups.
- 4th. Grouping of similar types, and judgment by style; giving a more detailed arrangement of the result of the 3rd method.
- 5th. Minimum dispersion of each type, concentrating the extreme examples.

We will now illustrate these methods as applied to usual prehistoric objects.

1st. Later interments in tumuli will be invaluable for proving the relative order of age. The superposition in caves and in lake deposits is equally valuable; and the common consent in the sequence of stone, bronze, and iron may render the deposits of those successive ages equivalent to local superposition. This evidence gives a basis of broad divisions, which serve to prove the order of sequence from early to late, and prevent our mistaking it for late to early. As we shall see, it is starting from such broad divisions that we refine to lesser periods.

2nd. A series of changes of gradual growth or decay in form and style of a single type, where they are all of one locality and unquestionable in their connection, is of the highest value. It enables a long period to be ranged in approximate order, and serves as a scale for noting the rise or disappearance of other types. Thus contemporary graves, which may not contain this fluctuating type, can be classified into the series, and so take their true place. When a series of one type is arranged, and all the slips containing it are placed in order, then when a fresh slip is to be placed in the series each type on it is looked for in the series, and the first and last example noted. (This is conveniently done by laying

a pen nib pointing forward from the first example, and another backward from the last.) When each type on the card thus has its beginning and end in the series marked, it is easy to see that the card ought to be placed after all the beginnings and before all the endings of the types. Often it does not so fall, and we find that the range of one type must be extended at one end or other so as to include the new card in the series. Thus new material is built into a series already marked out by the development of some one type.

3rd. A large group of graves may not contain any already datable material, but may fall between two more definite classes. Such in Egypt are some hundreds of graves which are later than the cups with white line decoration and earlier than the series of wavy-handled jars. The cards of these graves are then to be marked with the proportion of types of pottery that they have in common with the class best-known at either the beginning or the end of the series, those with types most like those of a terminal class coming naturally nearest to that class. This statistical sorting by resemblance to some definite class is the only way to break up a large indistinct mass. Thus graves of the early iron age should be sorted according to their proportion of objects in common with late bronze age graves.

4th. When a general statistical sorting has thus broken up a mass into vague stages, the next step is to refine this by grouping together similar types that come near each other, and so improve the order by more individual evidence. Thus, for instance, fibulae might be roughly classed by the proportions of pottery types that were found with them; but the similarities of form would enable them to be put more exactly into order. Or decorated vases could be more closely arranged by designs, after their general distribution was vaguely settled statistically.

Lastly, 5th. There must be sought the minimum dispersion of each type. It is clear that if we had a series of graves put really in the original order, any disturbance of that would be likely to spread the ranges of some of the contents. Hence the order which gives the shortest ranges of the types is probably the truth. Of course the ranges are not of the same length. Some types—especially the more simple forms—range over many centuries; other types—especially peculiar and complex decorations—were perhaps only made for a few years, or even for a single furnace load.

When we come to search the extreme instances—early and late—of each type, it is seen that they can be shortened up and concentrated until a point comes where there is tension between two types, and the card must contain either the first example of one type or the latest of another. Which is to give way is determined by seeing whether the extension of one type or the other will be most in accord with similar types related to these.

Thus finally the collection of card slips—each representing a grave—is reduced to the nearest approximation to the original order of the graves. When that is done the total slips are divided into equal groups—in the Egyptian case 900 slips were divided into 50 groups of 18 slips each—and the boundaries of the groups may be slightly modified so as to include the boundaries of well-marked types just within

a group. These groups are then to be numbered, and these numbers are the sequence dates of the groups. For the prehistoric Egyptian I have formed 50 groups, and leaving 29 stages for earlier groups that may be found, and 19 stages at the other end for later connections with historic times, I have numbered the groups used from 30 to 80. In the practical working the doubt about the position of a type rarely extends to 10 stages, and that only in case of rare types but little known; for ordinary well-known types a change of 3 or 4 stages is seldom caused by revision, and often a change of a single stage would distinctly upset the arrangement for the worse. The scale of fifty stages is therefore none too detailed. We know nothing yet of the years covered by these fifty stages; but looking at the number of graves in relation to those of the historic age, and the changes of style, we can hardly suppose it to be less than a thousand years, very possibly double that. The presumption of slower changes and fewer graves in more barbaric times would lengthen rather than shorten the estimate.

Then the lists of the range of each type can be drawn up, stating between what limits of sequence dates it is found. Such a division in stages and such a list of ranges is useful for working purposes at earlier parts of the proceedings, especially if many hundreds of graves have to be dealt with.

In dating any class of objects, such as spears, adzes, fibulæ, combs, etc., the process is to look out the age or the range of age of each of the graves in which such objects are found; such a list will run somewhat thus:—s.d. 43, 52, 47, 46, between 37 and 51, 42, between 49 and 60, and so on. Here the graves with badly defined age, as 37 to 51, and 49 to 60, do not affect the result, as the other examples all fall within those limits, and we can date the object as varying from 42 to 52 in sequence date. Sometimes we only have badly defined graves as evidence, and find such ranges as 26 to 49, 33 to 70, 42 to 60; here all we can say is that it must be from 42 to 49, and may extend farther.

On thus working out the sequence dates of the prehistoric Egyptian we can trace the course of that barbaric civilisation. Remembering that 30 to 80 is the range that we are dealing with, we can say that the finest serration of straight flint knives and lances is at 32 and extends down to 43 (see Fig. 5) in common use, and was kept up as grand specimens to 65. The forked lances with a wide fork (32 to 43) precede those with narrow cleft fork (38 to 61), and those with a definite tang for hafting go as late as 70. The curved knives with rounded butt are the earliest, beginning about 39; they are followed by the sickle-shaped knives at 45 to 65; and the very regular surface flaking on wide flat knives does not come in before 57, and becomes coarse by 65, continuing down to 78, and thus on into the early historic flaking. The large triangular flakes with partly worked edges were not very early, beginning about 41, and large ones ending at 61, while smaller flake knives last on to the end. The square-ended flake begins at 63, and lasts on till it is the main type in the early historic times.

Of the slate palettes (see Fig. 2) the rhombs and well-formed animals are the earliest, from 31 to 40 or so. The fish and turtle forms begin at 36 and become

degraded by 50, lasting on in very rude shapes to the end. The bird slates begin mainly at 44, and become degraded at 60, while the plain squares run from 37 to 70, when they were ornamented with border lines on to 80.

In the use of metals, gold and silver are commonest about 42 to 46, which is, perhaps, the age of most prosperity and foreign connections, when the decorated and later styles of pottery were coming into use. Copper was used from the earliest age, 30, when only a few simple types of cups in one kind of pottery were made (see Fig. 6). Harpoons and small chisels came in about 34, needles about 48, adzes for wood-work about 52, while a large square chisel and plain square axe blade only appear at 78. Foil and bands seem to have been made before wire was hammered out. In weapons the disc-shaped mace head is the earlier (Fig. 5) and disappears when the pear-shaped mace came in, which lasted into early history.

Thus this chaos of over nine hundred types of pottery, hundreds of stone vases, weapons and tools of flint and of copper, ivory work, and beads, extending over many centuries, perhaps one or two thousand years, has now been reduced by this system to an orderly series, in which we can not only state exactly the relative order of the objects, but also the degree of uncertainty and the extent of range which belongs to each object. We have here a new and exact method for dealing with all those vague ages as yet unfathomed, and for extracting all that is possible about their history. Prehistoric archaeology has made another step toward becoming an exact science. And now the responsibility of those who excavate is tenfold increased, as the extent of their care and exactitude will more than ever restore or ruin the history of the past.

#### *Illustrations of Sequence Dates in Prehistoric Egypt.*

Fig. 1. Types of pottery of seven successive stages, the sequence dates of each being at the right. In each stage are shown forms which are peculiar to that stage, together with two forms which pass through into an adjacent stage. Thus the pottery of each stage may be regarded as what would be most typical and important in a tomb of that period. It will be readily seen how impossible it would be to invert the order of any of these stages without breaking up the links between them. Thus if there be sufficient variety of pottery in any tomb its true position in sequence with others is exactly fixed, and it cannot be displaced without stretching the range of some of the types of pottery. At the left ends of the five lower rows is the wavy-handled type, in its various stages; the degradation of this type was the best clue to the order of the whole period.

Fig. 2. Having dated all the pottery types, it is possible to date all other objects by their association with pottery. Thus it is possible to trace the history of the slate palettes. The forms of these slate palettes, used for grinding face paint, are very varied. The rhomb is the earliest type, but died out by 37, except in rude forms, which lasted till 47. Quadrupeds are well worked at first, but become rough by 40, and rarely recognisable later on. Fishes and turtles begin at 36, become rude by about 50, and were ovals and discs by 70. Birds only begin at 46, and double birds at 38; they also become very rude before the end of the period. The squares begin at 37; but at 67 notched borders appear, and from 70 to 80 line borders.

Figs. 3, 4. The genealogies of some forms of pottery from beginning to end of the whole



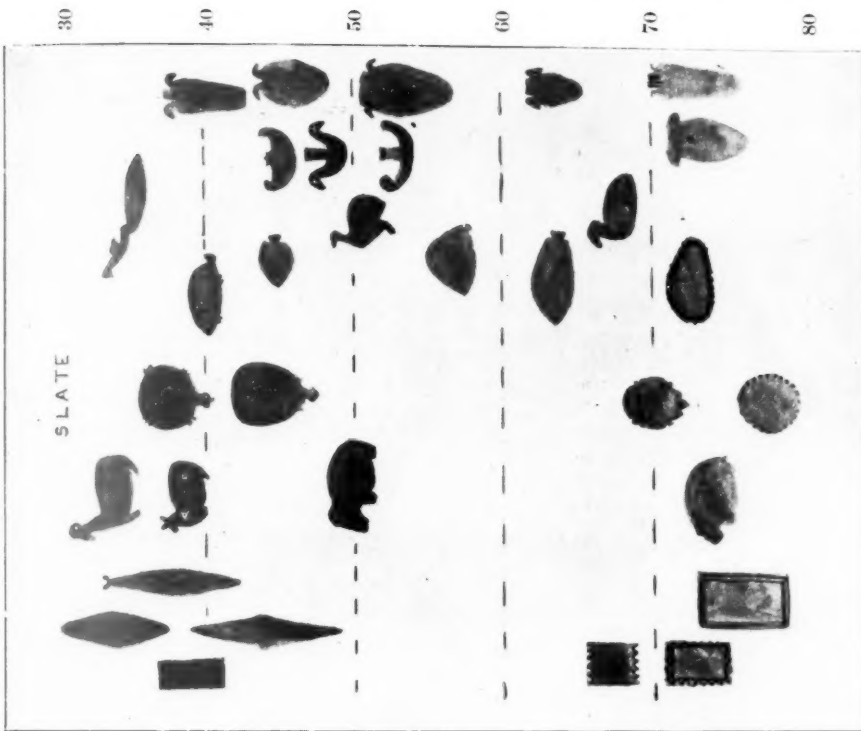


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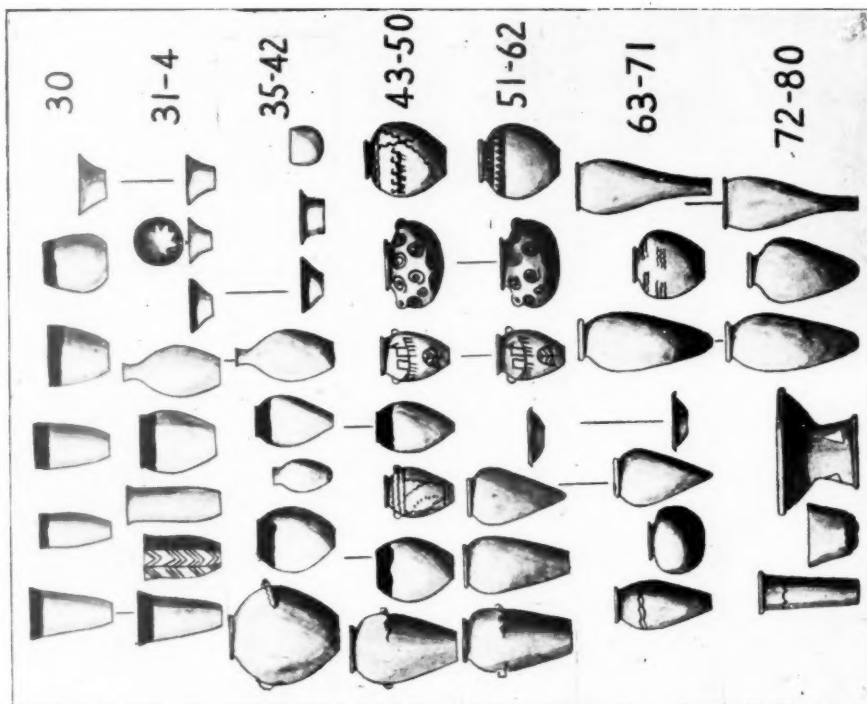
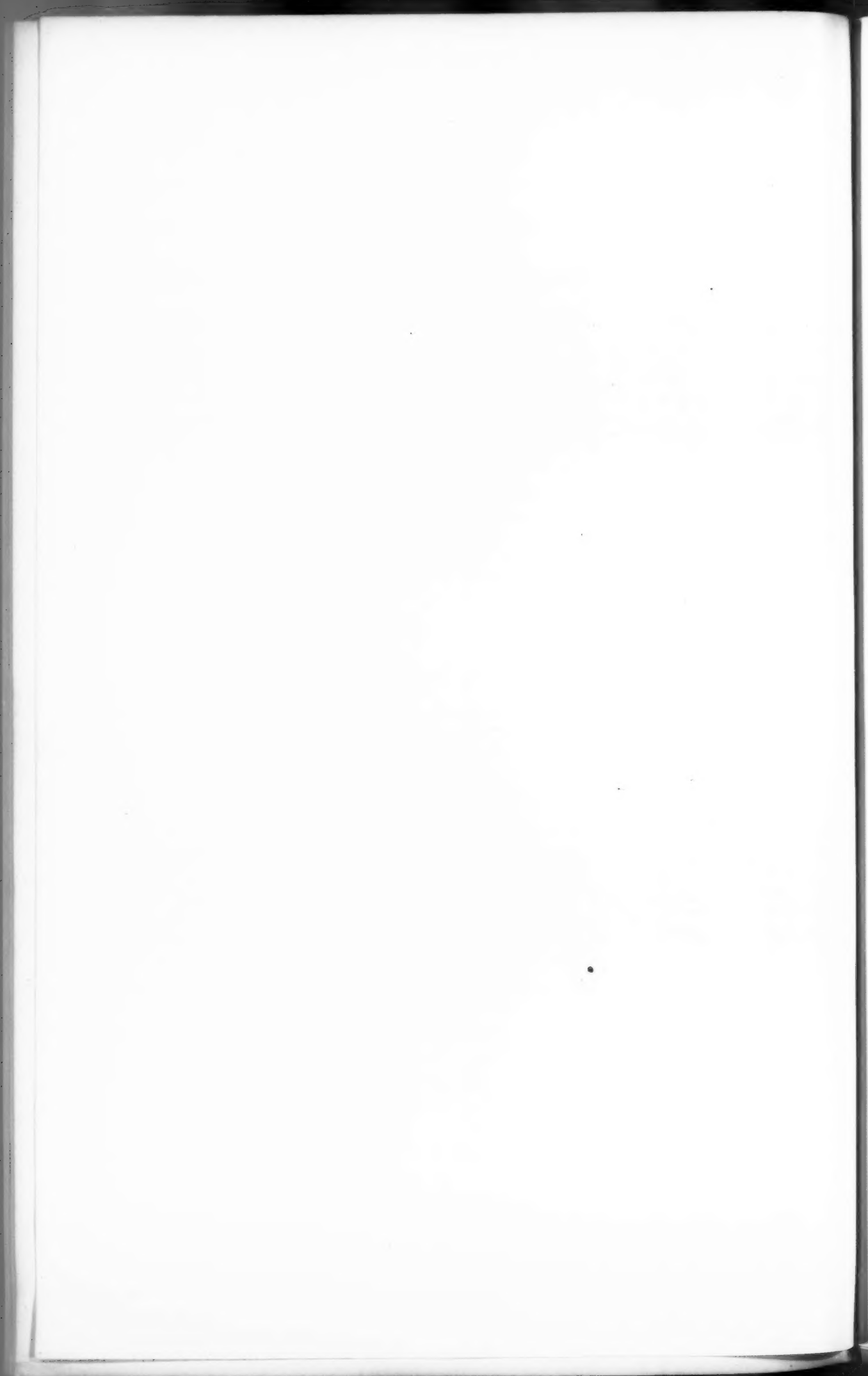


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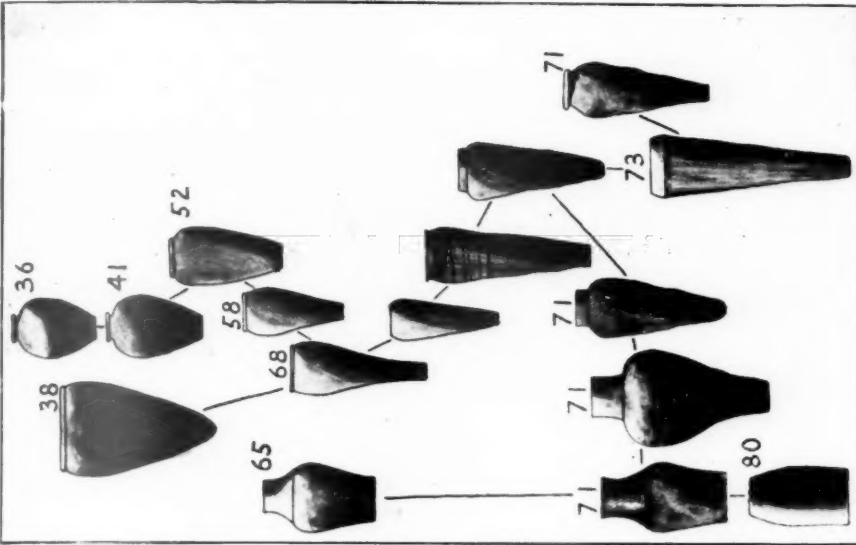


FIG. 4.

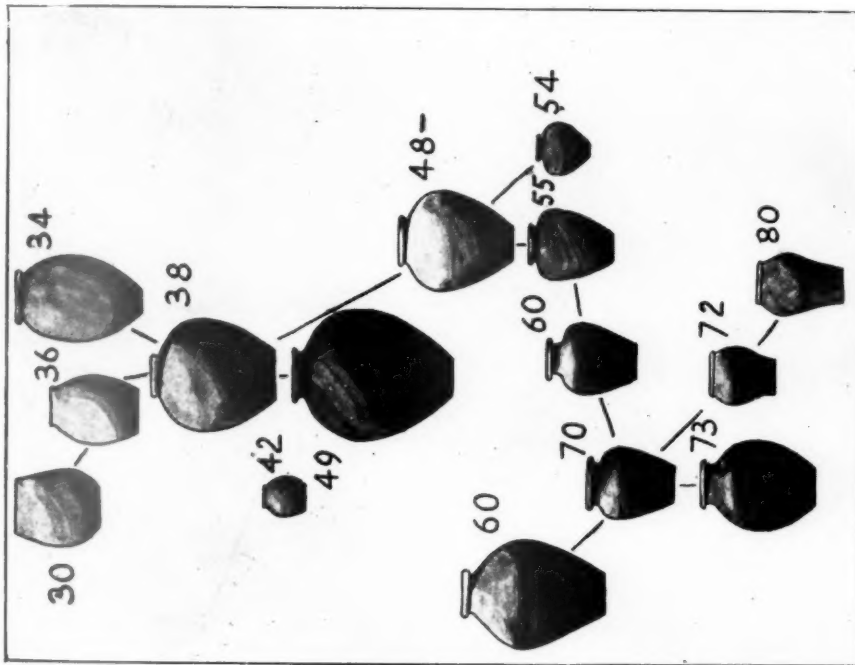


FIG. 3.

FIGS. 3, 4.—The genealogies of some forms of pottery from beginning to end of the whole period. These forms pass through two or three different fabrics showing that form is more important than material.





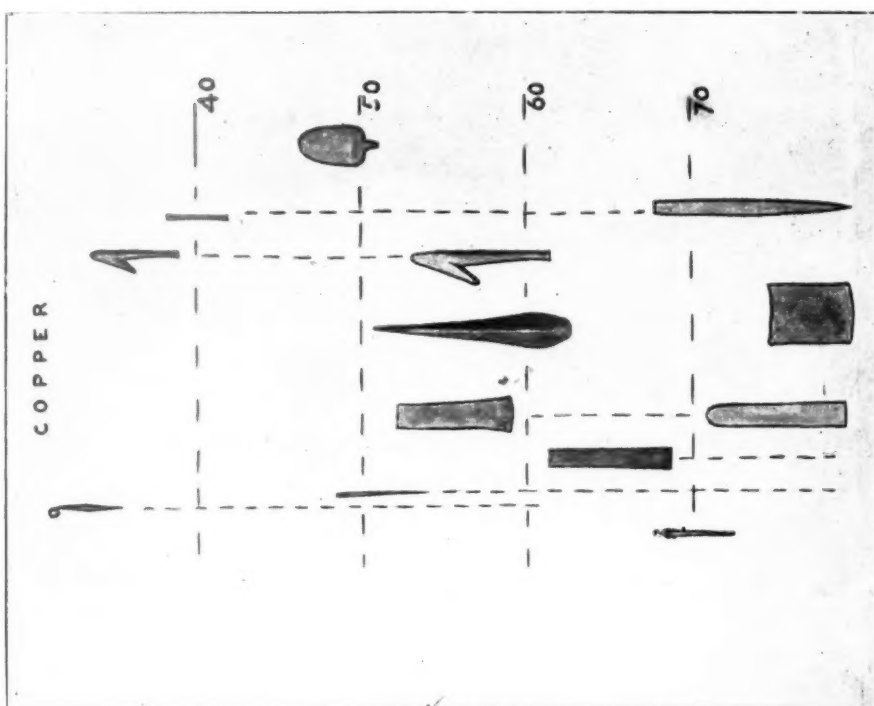


FIG. 6.—The copper tools begin with small pins to fasten the skin cloaks. Then harpoons modelled on the forms carved in bone. Small chisels appear at 38; wide adzes for wood work at 52, rounded at the top in 78; and a deep, stout chisel and simple axe at 78. Thus metal is found in the oldest graves known; it becomes varied in use by about 50, and further improved at the end of the period.

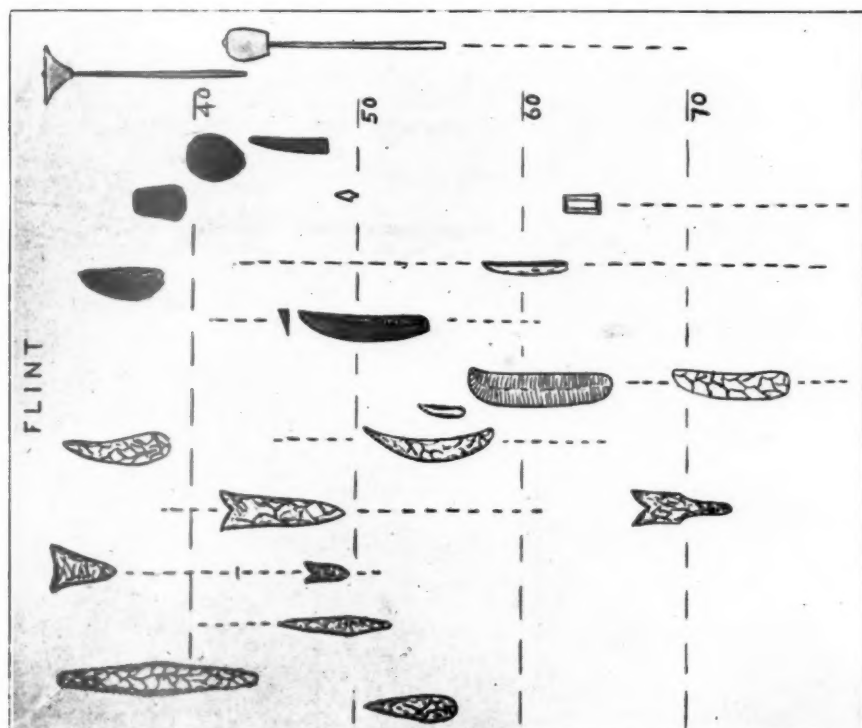
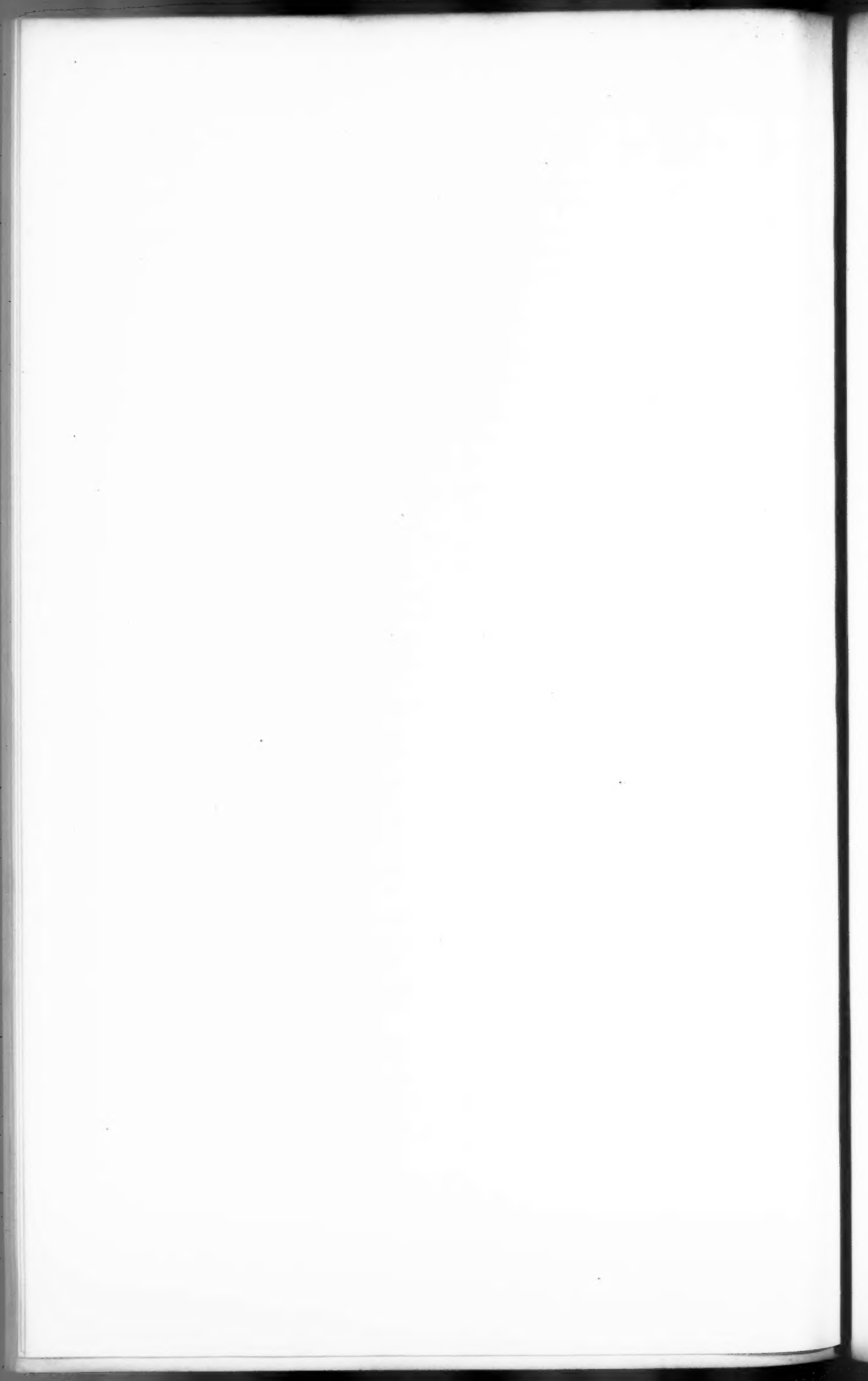


FIG. 5.—In the earliest graves the notching of the saw edge is delicate and regular, but the surface flaking is not in any pattern. The fine ripple flaking with regular ridges, on the face, belongs to the middle period of 57 to 66. The knives begin curved with rounded butts, become long and sickle-shaped, then wide and flat with straight edges, and lastly rough and thick. The forked lances are wide and flat-ended at first, then deepen to a V groove, and lastly have tangs.



period. These forms pass through two or three different fabrics, showing that form is more important than material.

Fig. 5. The history of flint-working can be traced in the same way as that of the slates. In the earliest graves the notching of the saw edge is delicate and regular, but the surface flaking is not in any pattern. The fine ripple flaking with regular ridges, on the face, belongs to the middle period of 57 to 66. The knives begin curved with rounded butt, become long and sickle-shaped, then wide and flat with straight edges, and lastly rough and thick. The forked lances are wide and flat-ended at first, then deepen to a V groove, and lastly have tangs.

Fig. 6. The copper tools begin with small pins to fasten the skin cloaks. Then harpoons modelled on the forms carved in bone. Small chisels appear at 38; wide adzes for wood-work at 52, rounded at the top in 78; and a deep, stout chisel and simple axe at 78. Thus metal is found in the oldest graves known; it becomes varied in use by about 50, and further improved at the end of the period.

In all of these series of changes in slates and tools we see a regular progression, yet this dating results solely from the pottery with which they were found; and thus this regularity of results is the strongest proof of the true and solid basis of the classing by sequence dates.

ON THE DISCOVERY OF *NERITINA FLUVIATILIS*  
WITH A PLEISTOCENE FAUNA AND WORKED FLINTS  
IN HIGH TERRACE GRAVELS OF THE THAMES VALLEY.

BY H. STOPES.

[PRESENTED AT THE MEETING OF MAY 15TH, 1900.]

ON April 27th last I made the welcome and long-sought-for discovery at Swanscombe, Kent, of a rich deposit which should establish the geologic date of these Terrace gravels of the lower reaches of the Thames Valley. I found the workmen had cut into a deep and exceedingly fossiliferous band of stratified sands and gravels, capped with a thin layer of tough clay. Since then I have obtained many shells, bones, teeth, and worked stones, some of the latter being well-made implements. All these occur in the shell bed which rests upon the chalk at a level of 78 feet O.D. The thickness of the whole series to the surface is 14 feet, of which 10 feet yields shells.

This pit occupies relatively the same position on the left shoulder of the Ingress Valley as it rounds into the slope of the south bank of the main Thames Valley, as does the opposite pit at Galley Hill, some 500 yards distant. Twelve years ago at this point, in one of the chalk pits owned by Messrs. Bazley White and Co., was found, together with other parts of the skeleton, a human cranium of very primitive type, which has been described by Mr. E. T. Newton,<sup>1</sup> F.R.S. This was on the right bank, just at its mouth, of a small but well-defined tortuous valley which, starting from the centre of the great wood at Swanscombe and passing by Alkerdene and Ingress Abbey, runs into the Thames, after a course altogether of nearly two miles. The enormous drain by man upon the water in the chalk has now caused the little stream which eroded this valley to disappear, but when Swanscombe Wood was occupied by a large and very splendid fort it probably was a sparkling stream that washed round two sides of a later (so-called) Neolithic settlement of much interest.<sup>2</sup>

The Terrace gravels on both sides of this small valley range from 78 feet to 102 feet O.D. On the Galley Hill or north side they have been worked for forty years, and during nearly the whole of this period they have enriched many collections with tools of fine form and size. The levels of the two sides are the same. The whole of the deposit is embraced in the N.E. corner of the 6-inch sheet IX, Kent, and in the 25-inch sheet IX, 4.

<sup>1</sup> *Quart. Journ. Geol. Soc.*, Aug. 1895, vol. li, pp. 505-527, 2 plates.

<sup>2</sup> *Proc. Brit. Assoc.*, 1894, p. 785.

Doubt has often been thrown upon the age of these deposits, as hitherto only five mammals and four molluscs have been recorded by Mr. Newton, and some of these were taken by Mr. Spurrell from the lower brick-earth. Careful examination of the numerous species represented by the vast numbers of shells and the fragments of bones, etc., now exposed should enable their position to be determined with fair exactitude. The problem will require prolonged examination and study, which must be speedily undertaken, as the whole deposit is now being rapidly removed.

The association of *Neritina fluviatilis* with so many extinct species and at this altitude in British gravels has not hitherto been recorded.

Mr. A. S. Kennard has thus far determined the following species:—

Elephas primigenius.	Planorbis nautilus.
<sup>1</sup> Rhinoceros leptorhinus.	„ marginatus.
Bos primigenius.	„ glaber.
Equus caballus.	„ spirorbis.
Cervus elaphus.	„ contortus.
Canis lupus.	<sup>1</sup> Paludestrina marginata.
Helicella caperata.	Bithinia tentaculata.
Helix nemoralis.	Neritina fluviatilis.
Pupa muscorum.	<sup>1</sup> Unio littoralis.
Pyramidula rotundata.	„ tumidus.
Ancylus fluviatilis.	<sup>1</sup> Corbicula fluminalis.
Limnæa auricularia.	Sphærium corneum.
„ peregra.	Pisidium amnicum.
„ truncatula.	<sup>1</sup> „ astartoides.
	Pisidium fontinale.

Now extinct in Britain.



## ANTHROPOLOGICAL REVIEWS AND MISCELLANEA.

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*Readers of the Journal are invited to communicate any new facts of especial interest which come under their notice. Short abstracts of, or extracts from, letters will be published at the discretion of the Editor. Letters should be marked "Miscellanea" and addressed to The Secretary, 3, Hanover Square, W.*

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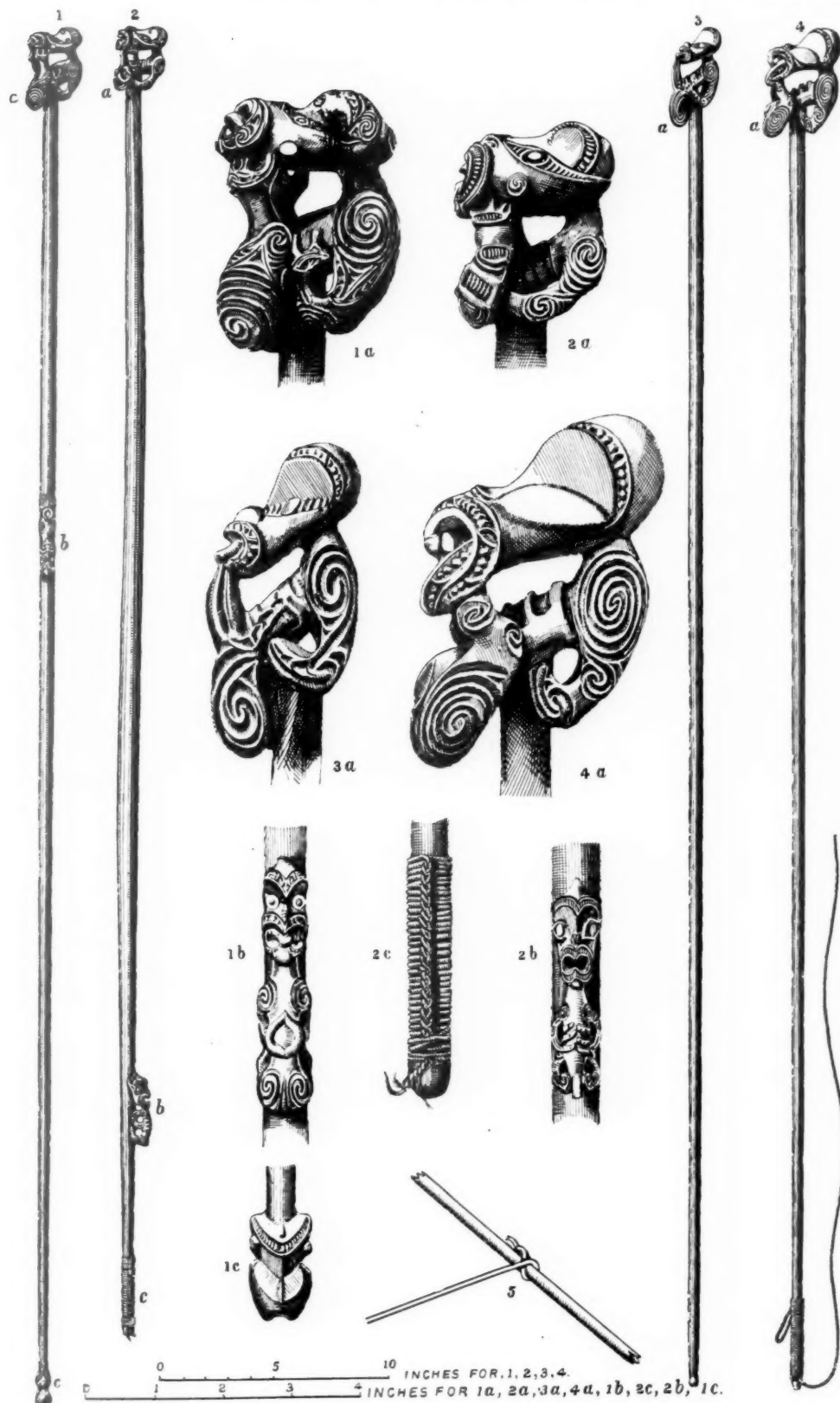
### NEW ZEALAND KOTAHAS OR WHIP SLINGS, FOR THROWING DARTS, IN THE BRITISH MUSEUM. (With Plate XXXIV.)

Mr. Hamilton in his work on *Maori Art* (Plate XXX, Fig. 2) figures a native using a kotaha in the act of throwing a kopere or dart.

Among the very earliest acquisitions in the British Museum are four specimens of the kotaha, one of which I figured in the *Ethnographical Album* (Plate 380, No. 2). At that time the use of this implement was unknown to me, and although I had photographs taken and sent out to New Zealand, I was unable to obtain any information until I was out there myself in 1897. By the courtesy of Mr. Cheeseman, the Curator of the Auckland Museum, who takes the greatest interest in everything affecting the Ethnography of the Maori, I interrogated, through the Government interpreter, two old Maori chiefs, who happened to be in Auckland at the time of my visit, and was enabled to go through with them not only the specimens in the Museum, but also the drawings in the album, as well as those in General Robley's work on *Moko*, and to gather some valuable information and corrections. Of the kotaha there is not, as far as I was able to learn, a single specimen in New Zealand. The use of this implement was to throw darts into besieged camps, and from the description given me by the Maori chiefs it could be thrown to a very considerable distance. Now to do this it is evident that the shaft of the kotaha must be both longer and more pliant than the one figured by Mr. Hamilton.

The early writers speak of throwing darts into besieged camps as well as throwing bunches of lighted leaves, but do not describe the means by which this was done. It is evident that the kotaha was the implement used. Mr. Hamilton speaks of the cord being made of dog's skin and passing through a hole at the end of the kotaha. It will be seen that in none of the four specimens here figured is this the case. The cord is of twisted fibre and is lashed on to the end of the shaft which terminates in a knob to prevent the cord from slipping. (Fig. 2c.)

Mr. Hamilton describes the dart "as a rough stick, fairly straight, from four to five feet long, with one end sharply pointed, and the point charged in order to harden it, it was moreover cut nearly through about two inches from the point, so that it might easily break and leave the piece in the body of the wounded enemy." The darts, he says, were stuck loosely in the ground pointing in the direction to



NEW ZEALAND KOTAHAS OR WHIP-SLINGS.  
FOR THROWING DARTS: IN THE BRITISH MUSEUM.



FIGURE-HEAD OF A WAR CANOE, NEW ZEALAND.  
British Museum. Scale in inches =  $\frac{1}{10}$  natural.



A CHIEF'S IMPLEMENT OF WAR ("TOKI"), NEW ZEALAND.  
British Museum. Scale in inches =  $\frac{1}{4}$  natural.

which they were intended to be thrown, the cord was then looped round the dart as shown in Fig. 5, copied from the illustration in Mr. Hamilton's work.

I do not know of a specimen of the kopere in this country, nor did I see one when in New Zealand.

JAMES EDGE-PARTINGTON.

NOTE ON A CARVED CANOE HEAD FROM NEW ZEALAND. (With Plate XXXV, 1.)

Mr. Hamilton in his work on Maori Art, p. 12, in describing this particular type of canoe head, speaks of it as being very scarce, and that it appears to have been almost confined to the North, more especially to Auckland and the district of the Waikato River. When complete, he says, it consisted of four parts, instead of a single piece carved from the solid as in the case of the commoner type (Hamilton, Maori Art, Part I, Plates I, IV).

Our illustration shows the central portion, the three remaining parts consisting of (i) a flat base, grooved along its centre and across its broadest part to receive the two upright portions. (ii) A cross piece on which is carved the little human figure, (Huaki) which looked into the interior of the canoe, and (iii) a realistic human head, sometimes movable, and without the usual protruding tongue, affixed to the front of the base. (Hamilton, Part I, Plate X.)

Mr. Hamilton speaks of this central portion, both in the case of the composite form, and of the type carved from the solid as being alike, called by the natives "Manaia." He does not give a reason for the name, but it is, I think, taken from the ornamentation on the composite form, which is clearly derived from a snake (manaia). This form was, I believe, only used on the ancient canoes, each of which was known by a particular name.

The ordinary war canoe is the product of a later date. When the Maories took to carving the figure-heads from the solid, they still gave the name of manaia to the central ridge, though the original style of carving was now completely altered. In this sense the name would appear to be a survival.

In speaking of the ornamentation, Mr. Hamilton says that the whole of the art work of the Maories comes under the head of ornament; there are no representations in the solid of plant or animal forms, other than human, with a few exceptions, of which the manaia, a lizard or snake, is a remarkable example; of this there are several varieties, that having a snake's body with an eagle's (?) head being one of the most interesting, and carrying us back to some of the older mythologies. Specimens of these figures, which are so clearly represented in the subject of this note, are of considerable rarity. Mr. Hamilton figures two on Plate V, and another in the complete form on Plate X, and in the third series of the *Ethnographical Album* (Plate CLX) I have figured one in the Auckland Museum. In this Museum is preserved one of the ancient war canoes, nearly 80 feet long, the figure-head of which is in the possession of H.R.H. The Duke of Saxe-Coburg Gotha, and was exhibited for some time at the South Kensington Museum. Fortunately they have been able to replace it with one almost as good. The specimen here figured is at present in my possession.

C. H. READ.

NOTE ON A STONE BATTLE-AXE FROM NEW ZEALAND. (With Plate XXXV, 2.)

The subject of this note was, I think, a weapon and not an implement, and ranked with the *meri pounamu* as a chief possession. It was known as a *tohi-pu-tangata*, or warrior's stone battle-axe. (Polack, *Narratives of Travels in New Zealand*, 1838, II, p. 25.) Aiyai in her *New Zealanders* figures one in the hands of a warrior going to battle. (Plate LVIII.) In many cases the butt of the handle was pierced for a wrist-



cord, as is the case in this particular specimen, thus showing that it was used as a weapon.

Although there are many specimens in museums and private collections, there are a very few indeed which are in their original condition, like that now in question with this. It was obtained by Mr. Charles H. Read at the sale of the Wallace Collection at Distington, near Whitehaven, and so highly did the late owner prize it that he had a replica made, using fine Tahitian sennet for the lashings. This replica was sold at the same time, and I am afraid will turn up in some collection as an original.

The specimen here figured is at present in the possession of Mr. Read, but it is hoped that some day it may find a resting place in the British Museum.

JAMES EDGE-PARTINGTON.

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NOTES ON THE ROMAN ORIGIN OF A MEDIEVAL CHARM.

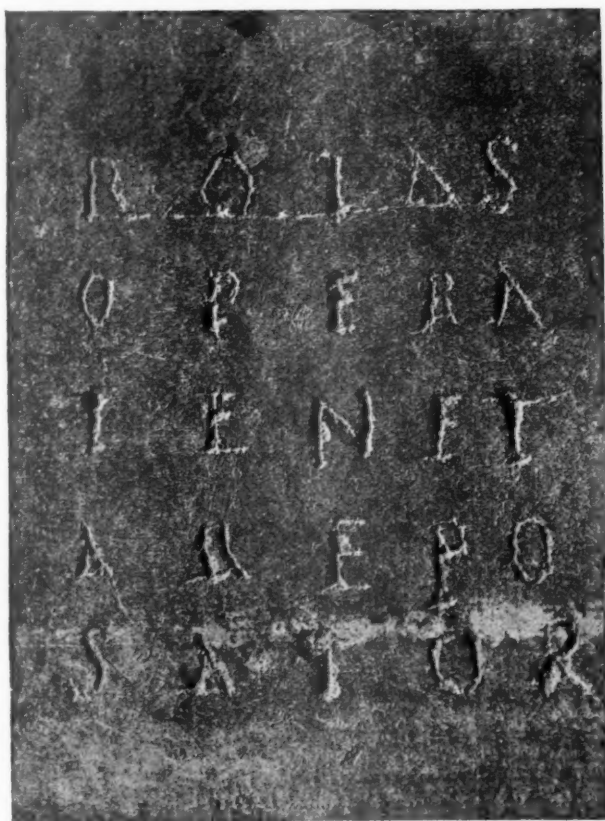
The charm :—

ROTAS  
OPERA  
TENET  
AREPO  
SATOR

is well known. It was used throughout the middle ages, and I am told is still employed in some parts of the world to-day. I here wish to notice only one point about it—its origin. Most writers call it mediæval, and in the latest discussion of ancient charms, by R. Heim (in Fleckeisen's *Jahrbücher*, xix Suppl., pp. 463–576), it is explained as constructed out of a monkish rule, SAT ORARE POTENTER ET OPERARE RatiO TuA Sit. This is not a convincing theory: it is not even good monkish Latin, and I think the charm can be traced back beyond the monks. In 1868, some Roman remains were found at Cirencester near the Victoria Road. These remains included coins, tiles, and painted wall-plaster, and among them was a piece of painted wall-plaster with the charm scratched on it through the paint (see full-size illustration). The object was taken out of the ground under the eyes of Captain Abbott, then Curator of the Cirencester Museum, and deposited in the Museum, where I have seen it. Professor A. H. Church has published it in his *Guide to this Museum* (Cirencester, eighth edition, 1894), but it seems otherwise to have escaped the notice of many who would naturally be interested in it. The following reasons seem to me to confirm its Roman origin. In the first place it was found in the presence of a competent witness, and no one, Professor Church tells us, had any interest in forging it, or gained any money by its discovery. Secondly, the plaster and the lettering seem to me to be Roman, in particular the shape of the λ for A, and the guiding-line drawn under ROTAS is familiar enough on Roman inscriptions, especially those of a late date. Thirdly, the object was found among Roman remains, and would naturally be considered as a bit of wall-plaster from the same walls as those from which came the other wall-plaster then discovered—some of which is also in the museum, and, as it seems to me, is ordinary Roman wall-plaster. I emphasise these reasons, for I know no other Roman example of this charm. One was found in the south of France, which has sometimes been considered Roman (C. I. L., xii, 202\*), but it appears really to be mediæval. Nor do I know of any exact parallel of Roman date. The nearest, perhaps, are some "Palindromes" such as, for instance, we meet two pavements of Christian date ornamented with the words *Sancta Ecclesia* and *Marinus Sacerdos* in very elaborate anagrammatic fashion. These, however, are devices and



not charms. Despite, however, the absence of exact parallels, I venture for the reasons given above to ascribe this object to Roman times. It would be rash to date it more nearly. The lettering seems to me to agree with a late date, but I should not like to base anything on twenty-five letters. I would rather follow the indications afforded by the imperfect parallels just mentioned. These and others like them are hardly known till the fourth and fifth centuries. As to the word *Arepo*, I venture no observation. It may be connected with the Celtic *arepennis*, a measure of land, and *arare*, to plough. Or it may be *opera* reversed to make the recurrence of the letters perfect. If it is the former, we may be inclined to fancy that the charm or device was invented in Celtic lands, in Gaul or in Britain.



The following references on the same subject may be added :—R. Heim : *Incantamenta magica graeca et latina*, in Fleckeisen's *Jahrbücher* xix, Supplement, pp. 463–576. *Zeitschrift für Ethnologie*, xix (1887), p. 72: *Verhandlungen der Berliner Gesellschaft für Anthropologie* in *Z. f. Ethn.* 1880–4. *Corpus Inscriptionum Latinarum*, viii, 9710–9711, and xii, 202\*. Holder, *Alt-keltischer Sprachschatz*, s.v. *Arepo*, and *Archæological Journal*, Dec. 1899, where the Cirencester inscription is further described.

Since writing the above, Professor Sayce has told me that he lately detected the charm, written in Greek letters, among some inscriptions on a tomb, converted into a Coptic church, in Nubia. These inscriptions he thinks to belong to the eighth century, to which period one of them is actually dated. See his article in the *Recueil de Travaux relatifs à la Philologie et à l'Archéologie Egyptiennes et Assyriennes*, xx (1898), p. 176.

F. HAVERFIELD.

## PREHISTORIC CHRONOLOGY. By Professor Oscar Montelius.

The usual course of lectures on the Yates foundation at University College, London, was delivered this year by Professor Oscar Montelius, of Stockholm, who has kindly furnished the following summary of his conclusions:—

"The determination of a chronology is of the greatest importance for prehistoric research. Chronology may be (a) *relative*, determining only the succession of the several periods; or (b) *absolute*, giving a date B.C. or A.D. for each period of a series.

"A *Relative Chronology* is possible for every age and every country, if only we have a sufficient number of good finds. A 'good find' is composed of antiquities found together in such a way that they must have been placed there at the same moment. Objects found in a lake-dwelling or any other dwelling-place, however, cannot be considered as a good find, because they do not conform to this condition, and so do not necessarily date from the same time. Similarly, if all we know is that certain antiquities have been found in a barrow, or in a grave-chamber, they cannot be used as a good find for chronological researches, because a barrow often contains several graves, and in a chamber we often find more than one body. The best finds are (1) graves containing only one body; (2) hoards.

"When a great number of good finds have been made in different countries, it is possible to divide the course of the prehistoric civilisation of each country into many periods. The succession of these periods is proved either by the relative position of the graves, or by the typological evolution of their contents. Typological series were illustrated in the course of the lectures by lantern diagrams showing (1) axes of stone, copper, bronze, and iron from Italy, and from Central and Northern Europe; (2) fibulæ from Italy and Scandinavia; (3) sword hilts in Scandinavia; (4) bronze vessels in Scandinavia, etc. Other diagrams exhibited the most characteristic types for the Copper Age, and for each period of the Bronze Age and Iron Age in Central and Northern Italy, in Central Europe and France, in Great Britain and Ireland, in North Germany, and in Scandinavia.

"The various types which are characteristic of any one period are very often met with in the same find; but types belonging to different periods are seldom found together. If, however, the types of any two periods are occasionally found together, these two periods are immediately successive in the series. Exceptions to this rule are remarkably rare, if not altogether absent. This proves that each period must represent a considerable length of time; for if the time had been short, the remains from different periods ought to have been much more confused than is found to be the case.

"An *Absolute Chronology* also can now be given for all these periods of the prehistoric civilisation of Europe; because not only the Iron Age and the Bronze Age, but also the Copper Age in Europe is contemporaneous with a historic period in Egypt and in Western Asia; and because numerous points of connection are known between the different parts of Europe and the East from the beginning of the Copper Age onwards.

"The date of each period is indicated in the table on p. 309."

In a discussion which followed the last of these lectures, Professor Flinders Petrie observed with reference to Professor Montelius' view of the relations which could be detected between the dolmens of N.-W. Europe, and those of N. Africa and Syria, that the probability that the dolmens belong to one continuous series, passing from Syria, along N. Africa, and up Spain to W. Europe, gives some clue to their age. There are no dolmens in Egypt, although they are in the lands on

B.C.	Central Italy.	Central Europe.	Great Britain and Ireland.	Scandinavia and North Germany.
2500	Copper (and Stone)	Copper (and Stone)	Copper (and Stone)	Copper (and Stone).
2400				
2300				
2200				
2100				
2000	Bronze Age	Bronze Age	Bronze Age	Bronze Age
1900				
1800				
1700				
1600				
1500				
1400				
1300				
1200				
1100				
1000	Iron Age	Iron Age	Iron Age	Iron Age
900				
800				
700				
600				
500				
400				
300				
200				
100				
A.D.				

either side ; and neither the pyramids nor other monuments are structurally descended from dolmens, but from wooden prototypes. This points to the dolmen-wave having passed Egypt when that land was a sandy waste, before Nile deposits had made it a fertile and inhabitable region. From the depth of the deposits, that cannot be after about 8000 B.C. ; hence it would seem that the dolmen type passed from Syria to N. Africa before that date.

Professor ERNEST GARDNER said he wished to ask Professor Montelius two questions, arising directly out of the lectures.

The first affected the relations between the north of Europe and the Mediterranean in the time of the Cromlech builders. Was Professor Montelius of opinion that the relations at this time were of influence rather than of commerce? The importance of the distinction lay in the fact that while influence might be all in one direction, and the time it took to spread from one region to another might vary considerably, commerce must be reciprocal, and must, as Professor Montelius had shown in the case of the amber traffic, imply an almost, if not quite, contemporary development.

Professor MONTELIUS replied that the relations at this time were certainly of influence, not of commerce.

Professor ERNEST GARDNER's second question was about the absolute chronology of Professor Montelius' periods, especially of the series that runs from the Mycenaean age to the Persian wars. The limits at each end appear to be fixed with certainty, but some of the dates given to intermediate periods, *e.g.*, that of the Regulini-Galassi tomb, are extremely difficult to reconcile with other archæological data. In view of the well-known fact that fifty years at one time often contain as much progress as two centuries at another, did Professor Montelius think it possible that some of the earlier periods might be longer, and the later ones shorter in actual duration of time, so that the middle periods would fall rather lower in the chronological scale?

Professor MONTELIUS thought that this was hardly possible, at least to any considerable degree. His chief reason for thinking this was that good finds never contained objects belonging to periods that were not consecutive; while, if any of the periods were shorter, some objects from the preceding period would be almost sure to have survived into the succeeding one, and so we should find objects with a range of three or more periods in a single find.

#### ON THE JUDICIAL OATHS USED ON THE GOLD COAST.

During my stay on the Gold Coast I was able, through the kindness of friends and by personal observation, to collect some interesting facts as regards the judicial oaths sworn in the native courts. The use of these oaths is undoubtedly slowly, but surely, dying out, partly owing to European legislation forbidding the use of those implying a curse on the native kings, or endangering their lives, and also because the people are more and more abandoning their native chief's courts for those held under European officials which they recognise as being uninfluenced by bribes or local intrigues. Some even bring their cases from great distances to be tried in Accra.

It will be noticed that the names of the oaths, in the districts to which I shall refer, recall almost invariably the memory of some disaster, or are associated with some disagreeable or painful reminiscence.

The oaths in use or recognised in the native courts of the Akwapims are three in number.

1st. *Wukudu*, commonly called the Wednesday (*Wukudu*) oath, also called *Sokoda*, from the name of the place where on a "*Wukudu*," or Wednesday, a former King of Akwapim was defeated in battle and lost his life. This oath when sworn on anybody may be tried by the chief of the village or town and a portion of any fine imposed by him usually remitted to the King of Akwapim.

The second oath "*Mtankese Miensa*" is of much higher importance than *Wukudu*, and can only be dealt with by the King himself, and not by local chiefs. "*Mtankese Miensa*" means "three great oaths" which are not allowed to be mentioned individually by name. The expression used is "*Meka Mtankese Miensa*," "I swear by the three great oaths."



The names of these are Saresu, Kwabrenyan, and Kwanyako.

1. Saresu, is the Tehi word for a prairie, and refers to the prairie where a king of Akwapim was killed in battle with the Accras.

2. Kwabrenyan, is the name of a village where a king of Akwapim sought refuge during a civil war, but was discovered and killed by his adversaries.

3. Kwanyako, is a place in Fanti, where a king of Akwapim fled and committed suicide after a defeat by the Accras. When this oath is sworn, the whole community of the village or town mourn on account of the sad memory it recalls.

Nshira, the third form of oath, means "blessing," but is applied to the oath sworn by the life of the King (*i.e.*, "May he, the King, die if my cause be not avenged or substantiated"), and then means cursing.

"Wa shira," "they have blessed," is the expression used and signifies that the King's life has been invoked by a party calling on his Fetish, say "Tofie Katawere" or "Kofi oni Somanka," the last-named Fetish being the most dreaded, to kill the King if the party on whom the oath is sworn refuses to attend or fails to substantiate his case. When a third party reports to the chief of a district that he has heard this oath sworn, he simply says, A. or B., has "blessed" on C. or D., meaning really has "cursed" the King.

As soon as the chief hears of it, he sends out and arrests the litigants, has sheep sacrificed on the spot where the swearing took place, and the mutton packed in hampers and carried by the litigants to the King.

The chief's messengers on arrival report what has occurred to the King's linguist who brings the matter to the King saying "Olis Aye," "Somebody has done," leaving the rest to be implied.

Thereupon the King assembles his chiefs and headmen, has two more sheep killed, and the blood sprinkled on the sacrificial stone to appease the Fetish. Originally the penalty of swearing this oath was imposed on both parties, and their families had to pay all the expenses of sacrifices, etc.; afterwards only the unsuccessful party was executed, and British legislation led to the penalty being reduced to a fine of 1500 herds of cowries, *i.e.*, £75, then to a further reduction to £6 8s., or £8, 2 sheep and 4 bottles of rum, and councillors' fees of £2. The unsuccessful party had also to pay for the sheep killed on his arrest and for those killed by the King to appease the Fetish. It is no longer allowed by English law. The penalties imposed in swearing Mtankese Miensa are the same, but the attendant expenses are not so heavy. For swearing Wukudu the fines vary, from two bottles of rum to £3 6s. 8d. and sheep must be killed. In Akwapim, where formerly human sacrifices prevailed, and later on sheep were substituted, rum is now often used instead, the King's person and stool being bathed and sprinkled with it when "Making Custom," as the expression used in broken English is.

In the Attabubu district, south-east of Kuucarri between it and the Volta river there is the "Tiquah" or King's oath. The King alone tries "Tiquah." A. accuses B. of a crime, viz., theft, and swears "Tiquah" on the accused. The accused may or may not swear "Tiquah" that he is innocent; if he does not, he is considered guilty, and pays the King from £2 to £8 according to circumstances, and has to give his accuser a large sum over and above the value of the stolen property in compensation. If the accused too swears "Tiquah," he did not commit the crime, both are taken to the King's Court and the one on whom "the case falls" has to pay the cost of the "Tiquah." If the accused is found innocent he can in turn bring an action for damages against his accuser.

The oath "Tram" is of the nature of Nshira, and is not used now. It begins



"Ohencimeo" "May the King die" if T.A. did so and so, or if B. did not do so and so. It recalls the memory of the King's ancestors, perhaps killed in battle, and the king fasts. There are also Fetish oaths, i.e., swearing by various Fetish, viz., may "Kodakrah" (Attabubu fetish) kill me if I don't speak the truth, or if I hide anything, an oath commonly sworn by witnesses.

They also swear by various Fetishes against an accused, but unless Tiquah is also sworn the matter is not brought into Court, but left between the Fetish and accuser or accused, whichever swears by them. If he is not killed by the Fetish, or does not die in the ten or twenty days or other time specified in his oath he is considered innocent.

The ground, i.e., what is eaten out of it like yams, plantain, etc., is invoked as Fetish, also water. Towards Krache pyramidical heaps of earth are built and made Fetish.

I have also heard of another curious form of oath. During a case being tried one man said to another, "I swear by this woman's foot that you did so and so," in this instance it was committed theft. The accused swore by the woman's foot that he was innocent, and that his accuser had committed the offence. Now the woman was a leper and her foot much diseased, the men swearing by her foot recalled to her the trouble and expense her foot had caused her in trying to cure it, and in the King's Court she would be entitled to damages from the one swearing falsely in consideration of the unpleasant remembrance brought to her mind,—and this principle seems to apply to all oaths sworn in the King's Courts.

A. CLARK.

#### ASTROLOGY AND THE DIVINING ROD.

In Pennant's *Tour in Wales* (London, 1778, pp. 53-4) the following remarks on the Divining Rod occur:—

"I have mentioned above the casual detection of our mineral wealth. It will perhaps amuse the reader, by informing him, that in this country, [Flint] within my memory, recourse was had to the *virgula divinatoria* or divining rod; which by powers sympathetic with the latent ore, was to save the usual expenses of search, and to point out the very spot where the treasure lay. A foreign adventurer, half knave, half enthusiast, made the trial; but it proved as unfortunately unsuccessful to himself as to his admirers. The instrument of the attempt was no more than a rod forked at one end, 'to be cut in a planetary hour on SATURN'S day and hour; because SATURN is the significator of lead' Jupiter, Venus, Sol and Mercury were also concerned in the time of the operation. 'Jupiter or *Pars Fortunæ*, was to be in *Conjunction*, *Sextile* or *Trine* to the LORD of the ascendant or second; and the better, if any reception happen; but BEWARE it be not by *Square* or *Opposition*; for that spoils all.'<sup>1</sup> Thus cut it is laid by for use on a heap of wheat or barley; and from the rod of Moses was also profanely called the *Mosaical* rod. This was to be held by the forks in both hands; and carried over the grounds suspected to contain the ore. It went unaffected over all the barren spots; but no sooner did it impend over a vein, than it pressed strongly down, and seemed to feel the same attraction as is between iron and the magnet. The sensible *Agricola* speaks of this practice incidentally, and gives a long account of the process, but places no kind of faith in it, assuring us that the skilful miner should follow the natural signs of the mineral veins, and despise the use of these enchanted sticks. He traces their origin from imposture."

Mr. Andrew Lang notes in his *Essay on the Divining Rod in Custom and Myth*

<sup>1</sup> Hooson's *Miner's Dictionary*, art. "*virgula divinatoria*."

that while Bleton, the great water finder of the eighteenth century, declared that the physical sensations of the searcher communicated themselves to the wand, the African theory is that the rod is inspired, and that its holder is influenced wholly by the rod. The African theory is evidently the more ancient and primitive of the two, and is that indicated by the astrological directions for choosing a rod which are here given. The ascent of man, not merely to the position of predominant partner, but to that of sole indispensable agent, is shown not only in Bleton's case but on the practice of the most advanced dowzers of our own day, to most of whom the rod is but a ceremonial accessory with which they frequently dispense altogether. T. V. H.

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THE BICYCLE AND CRIME.

In the *Pall Mall Magazine* for March, 1900, there is an article with the above title by Professor Lombroso. He remarks that "no modern mechanism has assumed the extraordinary importance of the bicycle, either as a cause or as an instrument of crime." Four examples are given of youths, two of them of good family but all with more or less natural tendency to crime, who resorted to theft, and in one case to murder, in order to obtain bicycles for their own riding. Then instances are given of cycles stolen that they might be sold again, and of the facilities afforded by cycles for the commission of crime. It is, however, admitted on the other hand, that the bicycle can also be used as an additional means for the suppression of crime, and that cycling is a healthy exercise, a passion for which is incompatible with the excessive use of alcohol. And as to health, Prof. Lombroso remarks:—"As a mental specialist I have seen the gravest forms of neurasthenia and melancholia yield before this marvellous machine, and I am sure that your great English specialists will bear me out."

Though the article is headed "The Bicycle and Crime," it is obvious that the remarks on the bicycle as a health restorer form the chief contribution to our knowledge of bicycle influences. For the desire to possess a bicycle may become a source of crime, but only as a desire to obtain an umbrella, a watch, or a diamond ring may become criminal, every object of desire becoming a "cause of crime" in the proportion of its popular attractiveness. Prof. Lombroso, however, admits that "the healthier men are, the better they are; and in so far as the bicycle makes for health it indirectly diminishes the causes of crime." The ape-like attitude of the "scorcher" and his habits generally, can, however, hardly make for health, and it would be interesting to learn whether the appearance of a hunted pickpocket which the scorcher presents is often, or not, the outward and visible sign of inward criminal tendencies. Perhaps this, with the influences of skirts and bloomers on the other sex—who almost invariably sit upright on their cycles—may be noticed in some future contribution of the great criminologist to this subject. T. V. H.

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NOTE ON ANTHROPOMETRICAL INSTRUMENTS DEVISED BY PROFESSOR RUDOLPH MARTIN.

At a meeting of the Anthropological Institute held on December 14, 1899, Mr. Duckworth exhibited some instruments devised by Professor Rud. Martin (Honorary Fellow of the Anthropological Institute) of Zürich. The instruments consisted of a new stand for carrying skulls, and of a set of anthropometric instruments for travellers. Of these a full description will be found in the *Archiv für Anthropologie*, 1899 (Bericht der III gemeinsamen und XXX allgemeinen Versammlung in Lindau.)

NOTE ON THE CONGRESS OF THE GERMAN AND VIENNESE ANTHROPOLOGICAL SOCIETIES  
HELD AT LINDAU FROM THE 4TH—7TH OF SEPTEMBER, 1899.

The thirtieth annual Congress of the German Anthropological Society was combined with the third Congress of the German and Viennese Anthropological Societies, and was held at Lindau on Lake Constance. Many circumstances combined to render the selection of this town an exceptionally happy one. For while it is the frontier town between Bavaria and the Austrian Tyrol, Lindau is situated in a district, which, as the excellent local museums (especially that at Constance) show, has proved a rich field for archæological research. If additional attractions were needed, they were amply provided in the form of beautiful lake and mountain scenery; and lastly visitors had the benefit of the great experience and foresight of the General Secretary, Professor Ranke of Munich, whose able management was seconded by an energetic local Committee.

It is not intended to give anything approaching to a detailed account of the Congress, of whose proceedings a full report appears in the *Correspondenz-blätter* of the German Anthropological Society; but it may suffice to mention that the general programme consisted of a series of sessions at which papers were read, and secondly of a number of excursions to various places of interest in the neighbourhood. After a preliminary social gathering in the town theatre, the official opening of the Congress took place on September 4, in the Council Chamber of the Town Hall. The list of communications was so heavy that it became necessary to hold an additional session. Though it is impossible to describe or even enumerate all the papers read, special reference seems to be called for by the valedictory address of the retiring president, Professor Waldeyer of Berlin, who before giving place to Frei herr Audrian, briefly reviewed the position of Anthropology as a subject of University teaching. It is interesting to notice that the University of Munich (Professor Ranke) leads the way in Germany in this direction. It is to be hoped that Professor Waldeyer's earnest appeal for the fuller recognition of the value of the subject will be responded to both widely and appropriately.

Of the succeeding communications, the most important were those of Professor Virchow (especially on the progress of Anthropology), of Montelius and Ranke (on Prehistoric Archæology) and on the physical side, those of Kollmann, Hagen, Martin and Klaatsch call for particular mention.

The excursions took the form of a series of visits to local museums where the evidence of prehistoric inhabitants of the shores of the lake is shown abundantly in the form of portions of the piles on which their dwellings rested, in addition to a great variety of objects, pottery, weapons, etc., representing their particular degree of culture and manner of life. At the termination of the Congress at Lindau a visit was made to Robenhausen in Switzerland, where Dr. Messikommer, so well known for his researches on the Lake dwellings of Switzerland, conducted members of the Congress to a newly discovered lake-dwelling; at about half a mile from Wetzikon is a flat swampy plain occupying the bottom of a valley, and evidently in former times the site of what must have been a lake of considerable extent. The piles were discovered about three feet below the surface of the peaty soil, and on the occasion of our visit, these blackened trunks of trees were exposed in an excavation about twenty feet in length by twelve in breadth and half full of peat stained water. I thus had the opportunity of photographing Professor Virchow and the principal members of the Congress standing with Dr. Messikommer at the edge of the newly discovered settlement, and this photograph I am now able to exhibit. After the day

at Robenhausen, the remainder of the original programme was carried on at Zürich and in other parts of Switzerland.

It may be mentioned that the number of members of the Congress amounted to 242, and lastly, that many of his old friends had the opportunity of welcoming Professor Sir William Turner, when he joined the Congress for an afternoon at Zürich.

W. L. H. DUCKWORTH.

#### THE ATHENIAN BIRTH CEREMONY OF AMPHIDROMY.

Thanks to the labours especially of lexicographers and scholiasts we know with some degree of exactness the ceremonies which were associated with the birth of Athenian children. The first of these ceremonies, the amphidromy, has been carefully studied by Salomon Reinach in *l'Anthropologie* (1899, x, p. 663). There has been misapprehension as to the details of the ceremony by some authors, but Reinach adopts the view that it consisted in the father running round the family altar in a nude condition and carrying the new-born infant in his arms. The running and the nudity of the runner appear to the author to have no relation to the cult of the domestic altar, nor to the idea of purification by fire. The new-born has need of repose and nurture, hence the couvade; but he should also become as soon as possible an active, enduring, and useful member of society. Thus the rite of amphidromy is performed by a man in the elementary costume of the stadium, who gives an example and, as it were, impulse to the new-born.

A. C. H.

#### RUDE STONE IMPLEMENTS FROM GWALIOR: A CORRECTION.

Mr. F. Swynnerton writes from Simla (29 March, 1900): "I notice in the brief summary of my paper on the Gwalior implements, which appears in the last part of the *Journal of the Institute*" (p. 141 of the present volume) "that it is stated that 'the implements' occur in the gravel of the Sourrka River, and throughout the alluvium on the banks to a height of 20 feet, and are also found scattered over the surface far from the river." The italics indicate what I consider is *not* what I conveyed in my paper, at any rate not what I intended to convey. What I meant to show was that flakes and implements are also found on the surface, but differ from those in the alluvium by being sharp and fresh looking, their age being only indicated by their time-polish. Those from the alluvium are generally much waterworn and discoloured, and when they occur among beds of gravel must be of the same age as the alluvium itself and therefore very much more ancient than the surface implements, more especially if the alluvium is of Pleistocene or even Post-Pleistocene age, I trust you will pardon me for pointing out this difference, for though it is likely enough that some surface-recent-implements may sink a few inches into the ground, they are not to be confounded with those found deep in the alluvium."

#### A CORRECTION.

Mr. G. Clinch writes as follows (14th December, 1899):—"In the newly issued part of the *Journal of the Anthropological Institute* (N.S. II, p. 123) I see I am reported to have expressed my obligation to Professor Rupert Jones for help in the preparation of the paper I read at the Institute on June 13th last. This is entirely erroneous and rather unfortunate. As a matter of fact, I had never met Professor Jones until the evening of my paper. I cannot conceive how the mistake can have arisen, and I shall be much indebted if you will kindly insert a correction in the next issue of the *Journal*. As far as I can understand the error arose from some



confusion between Professor Rupert Jones and Mr. G. W. Smith, who first found the neolithic remains at Millfield, and to whom I did refer with expressions of thanks."

The Editor of the *Journal* desires to express his sincere regret that such an error should inadvertently have been made.

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THE HUXLEY MEMORIAL STATUE IN THE NATURAL HISTORY MUSEUM.

The memorial statue of the late Professor T. H. Huxley was formally unveiled on Saturday, April 28th, 1900, by H.R.H. the Prince of Wales, the Honorary President of the Huxley Memorial Committee, and received by him on behalf of the Trustees of the British Museum. The ceremony took place in the Great Hall of the Natural History Museum at South Kensington, where the statue has been placed opposite that of the professor's fellow worker, the late Sir Richard Owen, and to the right of the front entrance to the noble hall of the museum.

The proceedings were opened by Professor E. Ray Lankester, who stated that subscriptions had been received for the Huxley Memorial from every State of Europe, from India and the Colonies, and from the United States of America, amounting in all to more than £3,380. These had been devoted to the objects selected by the Committee, namely, the foundation of a Huxley Medal and the execution of a memorial statue. Three years ago the Committee commissioned and obtained the execution of a medal bearing the portrait of Huxley, and had established its presentation as a distinguished reward in the Royal College of Science. The republication of the complete series of Huxley's scientific memoirs, which was proposed as one of the memorials to be carried out by the Committee, have been undertaken by Messrs. Macmillan, without assistance from the Committee; and two large volumes of these richly-illustrated contributions to science have been already published. The Executive Committee also secured the services of Mr. Onslow Ford, R.A., to execute the statue, which has been regarded as the chief object of the subscriptions. On the completion of the statue, the Trustees of the British Museum agreed to receive it and to place it in the Great Hall of the Natural History Museum.

The memorial statue of Huxley was the expression of the admiration, not only of the English people, but of the whole civilised world, for one who, as discoverer, teacher, writer, and man, must be reckoned among the greatest figures in the records of our age.

Sir JOSEPH HOOKER was deputed by the subscribers to transfer the statue to his Royal Highness, on behalf of the Trustees of the British Museum, with the intent that it should be retained in that noble hall as a companion to the statues of Professor Huxley's distinguished predecessors, Sir Joseph Banks, Mr. Darwin, and Sir Richard Owen. Sir Joseph Banks, Mr. Darwin, and Professor Huxley all entered upon their effective scientific careers by embarking on voyages of circumnavigation for the purpose of discovery and research, under the flag of the Royal Navy. Sir Joseph Banks and Professor Huxley were both Presidents of the Royal Society, and Trustees of the British Museum; and the scientific services of both were so highly estimated by the Crown and their country, that they both attained to the rare honour of being called to seats in the Privy Council.

Sir MICHAEL FOSTER, M.P., added that there were many ways in which Huxley worked for his fellow-men, other than the way of quiet scientific research. The truths with which he enriched science were made known in his written works; but that was a part only of what he did for science. No younger man coming to him for help and guidance ever went away empty; and they all came to him—anatomists,



zoologists, geologists, physiologists, botanists, and anthropologists. The biologists of to-day, not of this country alone, but of the whole world of science, forming, as they did, a scattered fleeting monument of that great man, all of them were proud at the unveiling of that visible lasting statue.

The DUKE OF DEVONSHIRE reported that the labours of the Huxley Memorial Committee were terminated, and that the whole of the subscriptions had been received, and came, he believed, from every civilised country in the world. But Professor Huxley's real memorial was to be found, not in that statue only, but in his published writings, and still more in the work which he did in promoting various scientific achievements.

The PRINCE then unveiled the statue, which is of white Carrara marble, and rests on a pedestal of yellow Verona marble, upon which appears in gilt lettering the simple inscription:—"Thomas Henry Huxley. Born May 4th, 1825. Died June 29th, 1895." The figure is of heroic proportions, and represents the Professor seated in an academic chair, and wearing his Doctor's robes. His right hand rests on the side of the chair, and the left hand is clenched, and this attitude, coupled with the expression on the face, which is an admirable likeness, is suggestive of the idea that the statue is meant to represent the Professor as being engaged in some absorbing argument.

#### THE PROTECTION OF ANCIENT MONUMENTS.

A Bill to amend the Ancient Monuments Protection Act of 1882 has been introduced this session at the instance of the National Trust for Places of Historic Interest. Under the care of Lord Balcarras and Lord Avebury it has passed through the House of Commons, and been read a second time and referred to Committee in the House of Lords.

The object of the Bill is to assimilate the law respecting historic monuments in Great Britain and in Ireland. Thanks to the amending Act passed in 1892, which applies to Ireland only, and to a provision (section 19) of the Local Government (Ireland) Act of last year, in Ireland at this moment either the Commissioners of Public Works or the County Councils can accept the guardianship of any historic monument, whereas, in Great Britain, County Councils outside London have no power with respect to any monument, and the action of Her Majesty's Office of Works under the Act of 1882 is confined to Megalithic remains. It can hardly be suggested that the circumstances of Ireland render exceptional legislation on the subject of historic monuments necessary.

The Irish Board of Works has done most excellent service in the preservation of ancient monuments, and it is to be hoped that both the central and the local authorities in England will make an equally good one of the powers now entrusted to them.

H. B.

SCIENCE ET FOI. L'ANTHROPOLOGIE ET LA SCIENCE SOCIALE. Par Paul Topinard. Paris: Masson, 1900. 8vo, pp. x, 578. (Presented by the Author.)

*Science and Faith; or, Man as an Animal, and Man as a Member of Society, with a Discussion on Animal Societies.* By Dr. Paul Topinard. Translated from the Author's Manuscript by Thomas J. McCormack. 8vo, pp. 600. Chicago, The Open Court Publishing Company; London, Kegan Paul, 1899.

From the leading, and, it must be added, misleading, title of this most informing and suggestive book, the reader might be led to suppose that it was one of those numerous essays which aim either at the reconciliation of science and religion, or else

at showing that the problem is insoluble, like those concerned with the squaring of the circle or the flattening of the earth. But its purport is far different, and the unfortunate title would appear to be due to the fact that the work is the response of one of the most eminent living anthropologists to an invitation issued in 1895 by the editors of *The Monist* to a number of leading European and American thinkers to discuss, from their several standpoints, the main problems of the philosophy of science and of the reconciliation of science and faith. In a somewhat characteristic way the author disposes of the "faith" element by leaving it severely alone, dismissing it with a few words at the end of the volume, to the effect that science and faith are mutually destructive, that the one is knowledge, the other belief, that those who seek to establish a harmony between them "only shatter the latter," because "a faith which is examined and shown to be in accord with facts ceases to be faith."

Even the long sub-title indicates but awkwardly the essential object of the work, which still aims at a "reconciliation," but a reconciliation between man as an animal and man as a social being, due regard being taken of the accepted principles of organic evolution. Thus come again under consideration the difficult questions raised by Mr. Herbert Spencer in his *Data of Ethics*, by Huxley in *Evolution and Ethics*, by Max Nordau, Dr. Paul Carus, Yves Guyot and others on the conflicting interests, rights and duties of the individual and society, involving a certain antagonism between the laws of the cosmic evolution itself. In his preface to the English edition, Mr. McCormack aptly remarks that while the book is essentially a contribution to sociology, it has the rare merit of being written by an original inquirer of the first rank in a branch of science which itself constitutes the groundwork of sociology, and that its conclusions flow from a direct and creative contact with the facts, and not from derivative and secondary theories about those facts. Hence, however little we may feel disposed to agree with many of the inferences, and some are certainly startling, we feel that we are in the hands of a competent seeker after truth, an investigator whose utterances claim all the more respect that even when apparently paradoxical they are still illuminating and always instructive.

This is especially true of the highly original analysis of the *ego*, which is from first to last animalistic, subjective, self-seeking, "ego-centric," the disturbing element in the social system. Then in the course of its normal evolution it acquires higher qualities of a moral order, which become fixed and accumulative by heredity, and to these are added others of a more personal nature, earned, so to say, by each and all for themselves. Thus are evolved the three egos—*animal* ("egoism incarnate"); *ancestral* (bequeathed as "predispositions"); and *individual* (the results of personal experience, early training, association and the like)—on which Dr. Topinard greatly insists, and in which he finds salvation. The first, though powerful, lies dormant; its interference is not obligatory, but optional, acting when its attention is sufficiently aroused, and when it is determined to have full sway. The two other egos, on the contrary, "enter into action mechanically." Combined "they constitute the semi-unconscious ego which answers spontaneously to the demand of the individual when the real or perfectly conscious ego is not moved to intervene. The conduct of man, neglecting the purely medullary reflexes, is the outcome now of the one and now of the other. The conscious ego is the author of reasoned and directly willed acts, the unconscious ego is the source of instinctive and more or less spontaneous acts which are termed impulses."

It was due to Dr. Topinard to let him speak here for himself, and the reader will notice how he glides from the three primary to two secondary egos (the "conscious"

and "unconscious" of the schoolmen), and how all are treated almost as separate entities, acting mechanically, spontaneously or even independently under varying conditions. But it will be objected that all are now merged in one, and that the individual, in the old sense of the word, is an irreducible unit, with nothing more than varying and distinguishing tendencies. But the outcome is the same, and all will readily assent to the general inference that the animal ego, the tendencies, the impulses, are capable of control, or direction, so as to bring them into due subordination to the higher (reasoning) faculties.

Here enters the rôle of society, of the state, which is society personified, and as such assumes the educational and other functions needed for the well-being both of the whole and of its individual constituents. Thus arise the different current views regarding the duties of society towards the members of the community—communism, collectivism, opportunism on the one hand, *laissez faire*, Mr. Herbert Spencer's individualism on the other. Here the author is full of compromises and apparent contradictions. Except in abnormal cases (idiots, cripples, etc.) non-interference is loudly proclaimed, and after fair play is established, as in duelling, "the rest is left to the valour and skill of the combatants" in the social struggle. Hence free trade, competition between capital and labour and between capitalists themselves, and so forth, because of "the impossibility of reconciling everything. Whatever may be the solution, justice is wrecked on the one side or on the other." A middle course, that is, a compromise, is proposed, as the only escape, and despite his repugnance to non-interference, the author goes the length of advocating the reversion of "bequeathable property to the state," and thus "enable the state to abolish all taxes which now press so heavily on the labour of man in society." The obvious objections to such interference with personal rights, primogeniture, etc., are not touched upon, and in general it may be said that the book is rather overcrowded. So many grave social, political and economic topics are dealt with that justice is done to few, and whether it be due to faulty translation or to over-condensation, there is certainly a lack of clearness in the treatment of several important subjects.

One point, however, is clear enough. Dr. Topinard is hopeful for the future of human societies, and while agreeing with Mr. Herbert Spencer on the necessity of developing altruism and certain hereditary habits, he rejects the profound pessimistic note struck by that great thinker towards the close of his monumental work. Spencer ends in pessimism because he rejects intervention while holding that individualism must result in failure. Topinard is an optimist because he thinks the inherited moral qualities, if properly controlled and directed by society, will suffice to realise a happy future for man. "We find that there is no choice: either we have to abandon ourselves to the *laissez faire*, which is nothing but the cosmic process itself and can only lead to anarchy and the rule of the strongest; or we must, by taking our stand on the nature of man, *direct* the ethical process." In this way alone can the primeval ego-centric be replaced by future altruistic, socio-centric, tendencies.

The foregoing remarks apply exclusively to the English edition, which, as stated on the title page, is a translation of the author's *original manuscript*, and in fact was issued about a year before the appearance of the French volume. It should now be stated that in this volume the original manuscript has been subjected to so many additions, suppressions and changes in the surviving text, that the French edition must be regarded as practically a new work. It is nearly double the size of the English book, of which M. Topinard tells us that it is "a revised and considerably enlarged French re-edition, the fourth part especially being entirely recast," with a



new sub-title (*L'Anthropologie et la Science Sociale*), "which answers better to the contents."

It is this fourth part which will now probably attract most attention, and be most severely handled by the critics. In it the ethic process, regarded as a corrective of the cosmic process, is applied, not merely to the individual as a member of society, but to societies themselves taken as ethical units in their inter-relations one with another. A wide scope, still within the legitimate province of anthropology, is here given for the treatment of such international questions as war and peace, free trade and protection, universal suffrage, all the higher functions of the state, diplomacy, and so forth, all studied from the fundamental standpoints of egoism and altruism. The same principles which regulate the conduct of the animal ego, as a social being, are also applicable to communities taken, let us say, as so many individual members of the cosmopolitan body politic. M. Topinard does not put it quite in this way, but that is what it comes to, and he accordingly devotes a special chapter to nations grouped, like the ego, in two categories—"Nations égoïstes et nations altruistes." Here of course is an ample field for the play of national sentiment or prejudice, which sometimes runs so strong as to warp the judgment even of the most eminent thinkers. That our author has not escaped from the subtle influences of this feeling is obvious enough, not so much because he groups England amongst the "nations égoïstes," as because he supports his views by what must be called a reckless disregard of historic truth. For the moment, of course, he entirely overlooks the altruistic tendencies of the English people in recent times, as shown in their many philanthropic movements, their attitude towards slavery and the slave trade, their societies for the protection of the aborigines, of women and children, and even of dumb beasts, their advocacy of free trade principles tending more than aught else to a universal comity of peoples, and so on. But he goes much further than this *suppressio veri*, and tells us that their very philosophy, arts and science are all alike limited by utilitarian bias, and that in England "ethnography for instance is cultivated because it leads to a knowledge of the natives, and thus prepares the means of turning them to account" (p. 541). We are, in fact, asked by M. Topinard to believe that his illustrious fellow-workers in this field—the Pitt Rivers, Lubbocks, Tylors, Prichards, Lathams, Evanses and a host of others past and present—have given their lives and often their treasure to the study of the peoples of the earth, in order to enable British capitalists to exploit them to their own advantage. Such an unworthy imputation could not be allowed by our Institute to go unchallenged, especially when made by one of its most distinguished Honorary Members.

A. H. KEANE.

MISSION EN CAPPADOCE 1893-1894. Par Ernest Chantre. Paris : Leroux, 1898.

M. Chantre, the author of this book, is well-known for his researches, archaeological and anthropological, in the Caucasus, Armenia, and elsewhere. Those who are familiar with his five quarto volumes on the Caucasus will be prepared for the lavish exterior of the present work. It was a happy thought to send an anthropologist rather than a classical antiquarian upon this mission, and it was perhaps also a happy instinct which determined M. Chantre to adopt a novel method of exploration. Few countries have been submitted to so careful a surface study as Asia Minor; in no country has excavation been so slight. Accordingly, M. Chantre devoted himself to a series of small tentative excavations, seven or eight in all, upon the "Euyuks" or "Tells" (artificial mounds) which are so common in this country, *i.e.*, instead of a single exhaustive undertaking, on the scale of those to which we are accustomed in other classical lands, he has been content to carry the roving surface exploration of his

predecessors a few feet beneath the ground. The results of these tentative borings are presented in a number of splendid illustrations, and they are in themselves sufficiently valuable to justify the wisdom of the author in pursuing a method, which could hardly be commended in other places, though the future alone can decide whether he has really skimmed the cream or whether the best has sunk yet deeper.

This book embodies the results of two expeditions; in each M. Chantre wisely confined himself to a single province, the district which in pre-Galatian times was known as Kappadokia, the seat, according to Herodotus, of the White Syrians, the cradle, according to some, of the Hittites. Among the latter writers we must number M. Chantre. The book is appropriately dedicated to M. Perrot, and the theory round which the author groups his discoveries is the theory of the "*Histoire de l'Art*." The Hittite hypothesis is described as "*la plus accréditée et celle qui est généralement admise actuellement*": almost at the same time as this book was published, an anthropologist not less distinguished for his researches in the same area, I mean Dr. von Luschan, felt obliged to apologise for describing an ancient bow as Hittite—"da aber das 'Modevolk' der Hethiter jetzt so arg in Misscredit gekommen ist." Indeed, the Hittites have probably received less than their rights of late, but of all this M. Chantre gives no hint. On the other hand, his book has all the merits of the work of the Hittologists; he treats his subject with the same genial breadth, regarding nothing as common or unclean, approaching the question from every side. And so even sceptics will find a brilliant light thrown upon the early material culture of Kappadokia, for M. Chantre is not only a fortunate discoverer and a patient observer, but also, as it seems to me, deals very justly and truly with the more important racial and archæological questions at issue in this sphere.

Kappadokia is happily situated between the great salt desert, which fills the centre of Asia Minor, and the more barren mountains of Armenia. It is well watered by the Halys and other rivers, and was famous especially for its horses and its wine. These products and its geographical position brought it into early contact with the great empires of the East, and created a prosperity which has left abiding monuments. Before M. Chantre's expedition we possessed photographs of the early sculptures of the land, several cylinders and seals belonging to the same circle, a few small figurines and plans of two or three important sites, practically nothing more. M. Chantre has discovered several new sites, he has brought back a great deal of pottery, many new seals, figurines, inscriptions, and such a full description of the general appearance of the land, that we are almost able to attempt a distinct valuation of early Kappadokian culture. Pre-Hellenic antiquities here fall into two main divisions. First, there are several traces of the polished stone age, none at present of anything earlier; the form of the axeheads and knives and the material, jade, diorite, obsidian, etc., point immediately to Syria, Armenia, and the Caucasus and thence further East. Only one settlement has been as yet found, but the various places from which M. Chantre obtained axeheads, etc., show how much must still lie buried, some of it in caves perhaps, beneath the rich civilisations which succeeded this. To the first of these later cultures, connected by M. Chantre, as by other savants, English, French, and Italian, with the Hittites of Syria, the bulk of this volume is devoted, and we need not apologise for passing over other periods in a summary fashion. In this "Hittite" civilisation we can already distinguish different epochs, but for the present we may follow our author in treating it roughly as a single whole, and ask to what centuries it is to be referred. Here I must differ from M. Chantre. He is tempted by Hittite theories to carry it back to the fifteenth century B.C. at least, *i.e.*, to the Tel-el-Amarna age in Syria and Egypt and the Mykenæan age in Greece, but although some



of his finds may belong to this period, and the "neolithic" remains obviously belong to a much earlier one, the flower of this Kappadokian culture seems to me to fall rather within the centuries 1100-600 B.C. In the first place, we are definitely in the age of iron (p. 67). Secondly, with these remains fibulæ have been found, which we know of at Sendjirli and Ivriz only after Assyrian influence had become powerful. Next, the pottery and the sculpture, though Chantre loosely calls the former Mykenæan, appear to be synchronous rather with the sub-Mykenæan and first Græco-Phœnician art of Cyprus and the sub-Assyrian Chaldic or Vannic art of Armenia. And, lastly, we know that Pterion (Boghazkieui) was a great centre in the time of Crœsus (550 B.C.) and must therefore have been a flourishing town with extensive buildings; how then are these "Hittite" remains, which Chantre assigns to the fifteenth century or earlier, still left not a foot beneath the surface? Arguments from accumulation are often fallacious, but I do not see how this particular fact can be explained, unless we refuse to identify Boghazkieui with Pterion, which few are inclined to do. To the evidence of the new inscriptions I will recur later. With this one criticism I turn to the great positive results of the mission.

M. Chantre traversed two important roads running from north to south and one or two minor cross-roads: upon all of these he found extensive traces of the same civilisation, and I have by me evidence, at present unpublished, of yet additional sites. We have to deal therefore with a culture spread over the whole land, its different centres connected by a regular network of communication, not as was once supposed following two great military roads. A site of this period now consists of a series of large mounds, grouped more or less systematically, but often at a considerable distance from one another and generally in the neighbourhood of a river. At Dedik there are no less than seven of these mounds all belonging to the same circle: M. Chantre suggests that they may represent military stations or simply a group of villages; tumuli<sup>1</sup> they certainly are not. In some cases I venture to suggest they may have arisen out of the Oriental's love of building: every petty monarch must build, even if he could not finish, a new palace for himself on a different site from that of his predecessor, and so a number of mounds are created in the same area, while the common people are throughout living for the most part in a single region near, flying only from their mud and wood houses to the royal citadel in times of danger. For the style of building we must turn to M. Chantre's accounts of Euyuk and Boghazkieui. The citadels were defended in the Oriental fashion by wall within wall, entanglement after entanglement (compare Sendjirli) and the construction is eastern also, sun-dried bricks upon a course or two of large stones. The plans of Kappadokian palaces are chiefly remarkable, because they show no trace at present of the most characteristic of all Syrian Hittite buildings, the "Hilani."

Our knowledge of the life which once stirred in these citadels is based upon the sculpture and smaller works of industry which have still survived. To the sculpture this mission has added nothing of the first importance; far otherwise is it with the pottery, the figurines in bronze and terra cotta, the cylinders, etc. The art of the figurines is, as Chantre says, neither Assyrian nor Greek: so far it may be regarded as individual, though there are distinct Chaldæan and Egyptian echoes in it, much like the faint reminiscences of classical art which survive in our barbaric Norman. But Kappadokian art is in character quite infantile: its products very seldom rise above

<sup>1</sup> A certain tumulus, however, was opened at Schar-Komana (p. 142) with interior buildings, like those in Lydia, Karia and elsewhere. Those in Lydia have been fancifully connected by Professor Körte with Phrygian influence, but for this there is no sufficient evidence, as we cannot take the Phrygian to Karia or to Komana.

the rank of antiquarian curiosities. Animals are better treated than men, but they do not compare with Assyrian works. The human figures are realistic and extremely ugly: the "Armenoid" type which they present being characterised by a huge nose, a high but receding forehead and no chin, huge ears magnified by heavy ear-rings. The pottery is equally rude and resembles Mexican or Peruvian ware quite as much as the Mykenæan to which M. Chantre compares it. It differs from the most primitive Cypriot and Rhodian painted ware chiefly in the greater use of free spaces and in the colours—red, white, and black being all applied in thick coats: so far as they can be held to point to any external region, both these characteristics seem to me to point to the earliest post-Mykenæan art of Cyprus. Long spouted jugs and huge pithoi, presumably to contain the famous wine of the country, are the commonest forms.

In truth, however, the importance of Kappadokia is not to be estimated by its achievement in the spheres of art or crafts. The genius of the ancient Kappadokians, as of their descendants the modern Armenians, was pre-eminently mercantile. This is clearly shown by the cuneiform inscriptions which M. Chantre has brought back. These fall into two groups, those from Boghazkieui (Pterion) discovered first by the keen eyes of Madame Chantre who accompanied her husband, and those from Kara Euyuk which the writer identifies with great probability as the earliest site of Cæsarea-Mazaka. The tablets from Boghazkieui, published by M. Alfred Boissier, another member of the mission, are mostly in an unknown tongue, presumably "Hittite"; the few decipherable are in Semitic Assyrian (Sayce), one contains a list of towns, the others appear to be charms, and not much is to be made out of them. "Le plus sage est de rien spécifier," writes Père Scheil, and M. Boissier's arguments for a very early date do not carry conviction. The inscriptions from Kara Euyuk are, like those from Pterion, disappointing in themselves to those who hoped to read off the annals of forgotten monarchs, but they have an importance of their own. For a long time specialists have known of a peculiar type of cuneiform writing, and Mr. Pinches nearly twenty years ago pointed to Kappadokia as the probable provenance of these tablets: this conjecture has now been confirmed and the actual site, from which the majority come, certainly identified. Those which have been deciphered consist mostly of contracts, loans of money (shekels and minæ) with the interest specified, dealings in clothes, lead, etc., the records clearly of a commercial community. The weights and the script point to the East, but we surely need not drag in the name of Sargon of Agade (3800 B.C.) to explain this: we have here a new manifestation of that commercial enterprise which planted Phœnician colonies over three continents, which subsequently in the early middle ages, carried Persian and Arabian merchandise across the steppes of Russia, and which at this day drives Jews and Armenians even across the Atlantic. The great conquerors, Sargon possibly among them, did but follow and consolidate from time to time a trade which existed long before and long after them: we must not press the military side into undue prominence. But is it not a striking thing to find a clumsy pictographic system arising in a land so long familiar with wedge-writing? We might account for it, if we assumed that the traders who used the latter were aliens, living perhaps in Ghettos like the Jews in Mediæval Europe, but we must wait for more evidence. Besides the cuneiform tablets M. Chantre discovered some new Phrygian inscriptions at Pterion. M. de Saussure comments upon these very judiciously: now that we know that Phrygian of some form or another was spoken right across the northern half of Asia Minor, the much debated Thracian "dogma" becomes a matter of secondary importance. The Aryan-Armenian and Phrygian invaders came from the north of the Black Sea, and it does not matter

so much whether they entered the land from the east or the west; some entered probably from each side.

Upon the religious or political organisation of Kappadokia at this period M. Chantre's researches have thrown no fresh light. The old Hittite theory of a single great empire does not receive any fresh confirmation, and some of the details by which it was supported are losing their probability. At the same time it appears more likely that the old inhabitants of Pterion were actually called Hittites, and belonged no doubt to the great Armenoid stock. I should be personally inclined to regard the organisation as consisting rather of a number of petty kingdoms or khanates: now one, now another, might exercise a comparatively wide suzerainty, the extent of which another more perfect list of towns will enable us to gauge. Gradually these principalities were first mediatized and then absorbed by the great Eastern Empires, Assyrian, Mede, and Persian, and upon their sites a series of priestdoms arose, until these were finally changed into municipalities by the Romans. We should thus have a history parallel to that of the Jews. The full publication of the results of Messrs. Lehmann and Belck's explorations in Armenia will probably elucidate many of these problems. For the present we must accept as the chief datum of M. Chantre's mission the commercial basis, with its eastward index, on which this early culture was founded.

M. Chantre also publishes some later monuments and a few inscriptions of the Roman and Byzantine period: further sundry geological, zoological, and botanical notes, the latter especially full, will also be found.

The book is written in the agreeable style which we expect from a French savant, and with an amiable freedom from all bitterness and personal recrimination which is beyond praise.

J. W. CROWFOOT.

ANTROPOMETRIA. By Rudolfo Livi. Milan: Ulrico Hoepli, 1900. Sm. 8vo, pp. 238, with diagrams. Price 2.50 lire. (Presented by the Author.)

*Antropometria*, by Dr. Livi, is a small volume of 201 pages, dealing with the present state of the science and art of Anthropometry (of which Dr. Livi has shown himself so thorough a master in the two bulky volumes, entitled *Antropometria Militare*, which have made his name a familiar one in the literature of anthropology). In the smaller work now under consideration, the subject is presented under the three headings of, I. Methods; II. Certain Anthropometric Rules; III. Anthropometric Identification; and finally an Appendix will be found to contain useful tables of cephalic and other indices. The following notes will give some idea of the treatment adopted in the consideration of the several methods:—the varieties of measurements are at first treated of under the headings of linear, cubic, and other measures, the various linear dimensions are then reviewed in detail, and the modifying factors, such as the relation between the total height of the intervertebral discs and the stature are indicated; measurements of the limbs, the trunk (sitting height), and the span are then considered, and two methods for measuring the head are discussed; one whereby the measurement is of the nature of a projection, whereas in the other case the absolute maximum is recorded. The dimensions of the nose, and the circumference of the thorax and the abdomen, form the subjects of the ensuing discussions, and this section terminates with instructions for the determination of certain physiological factors, *e.g.*, of weight, of grip, and of the cubic capacity of the thorax.

In the next place comes the treatment of results and the formation of indices; two classes of index are mentioned, consisting of (a) indices of the relations of two homologous quantities, *e.g.*, two linear dimensions of a body, and (b) indices wherein

quantities which are not strictly homologous, *e.g.*, weight and stature, are compared. Descriptive notes on methods of recording the colour and other characters of skin, hair, and eyes, and the shape of the nose constitute the next section of this part of the work.

On page 56 commences a further discussion of the treatment of observations, and in this place the statistical method is fully explained. After the advantages and the fallibility of the study of the simple average obtained from a series of observations has been discussed, the method of seriation is described, and the character and properties of the binomial curve enumerated. Such a curve, remarks the author, was furnished by observations on stature in the department of Emilia. This result being, however, comparatively rare, the various influences to which irregularities in the form of the curve may be ascribed, are then discussed. We may here note that the chief of these appear to the author to be (*a*) paucity of data, and (*b*) an inexactness in measurement, which is sometimes practically unavoidable, depending as it does on the selection which must be exercised by the observer when a measurement actually lies between two divisions on the scale. The value of the form of the curve, as indicative of the character of a population, forms the next subject of discussion, and herein some important sources of error are demonstrated, the particular example selected being again the stature in certain parts of Italy, the investigation being directed to testing the value of the curve as indicative of the presence of two types in a population, and the conclusion arrived at amounting to a demonstration that a certain minimal difference (in the case of stature equal to 12 cm.) must exist between the two mean dimensions, before such a curve can give evidence of the existence of the two types side by side. Moreover, the fallacy underlying the results published by Bertillon on this subject in reference to the population of the department of the Doubs, is exposed in the succeeding section (p. 85). We have not space for more than a reference to methods for facilitating the calculation of averages from long series, on the number of examples considered desirable in order to firmly establish generalisations from observations in detail, and for the graphic representation of results.

Part II gives an insight into the results of such work as is suggested in the foregoing pages: we find, accordingly, generalisations (which follow from the study of individuals) in the form of laws which regulate the rate of growth in stature and in thoracic circumference. A short section deals with the artistic canons of proportion in comparison with the anthropological canon, and we are given some interesting results on the nature of the distribution of the colour of hair and eyes, according to age, physical constitution and locality. In this section, too, will be found some interesting data as to the relation between stature and weight.

Part III deals with anthropometric identification on the principles ordinarily associated with the name of Bertillon, of whose method a *résumé* is given; there will thus be found paragraphs dealing with the necessary measurements, and the precautions to be taken in ensuring accuracy in obtaining them. The form of the ear and the recording of scars or other marks are discussed, and a form of stenography specially adapted to these purposes is indicated. (Such a stenographic method is in constant use under Dr. Garson in our own country.)

Finally, as we have already said, a long table of indices will be found appended to the descriptive part of this work.

We think Dr. Livi is to be congratulated on having successfully condensed the subject of anthropometry into the limits of a pocket book, and we believe that this volume will prove of very great use to practical students of that subject in all countries. We notice that there is evidence that the lack of consistency in the system of



measurements adopted in different countries, has caused much unnecessary difficulty in comparing results in time past (we refer especially to the adherence to measurement by feet and inches as contrasted with the metric system), and we hope that this state of affairs will soon be at an end. There is a slight lack of definiteness in describing one or two measurements, and in particular we are not certain as to the particular thoracic circumference (*i.e.*, in relation to the respiratory phases) which should be recorded. But beyond this, there can only be approval of what appears to us to be a thoroughly sound work.

W. L. H. D.

STATISTICAL METHODS: WITH SPECIAL REFERENCE TO BIOLOGICAL VARIATION. By C. B. Davenport, Ph.D. New York, John Wiley and Sons. Small 8vo, pp. 148. (Presented by the Publisher.)

Dr. Davenport's work is designed with a view to furthering the statistical study of the data obtained from biological observations of whatever kind. The first part of the book deals with the usual methods of recording results and with the most appropriate forms of illustration. In the section which deals with the records of the dimensions of plane figures, we notice the adoption of a number of terms used originally by botanists as descriptive of the shapes of leaves; these terms are believed to be much more generally applicable, and there is appended to them a list of indices formed similarly to the better known cranial indices (and like these expressive of the relation between two diameters of the object), but remarkable for the lack of grace which characterises their distinctive names, though it must be admitted that compensation is made by the consistency of the proposed nomenclature (*e.g.*, Index of Truncatedness, Index of Retuseness, etc.).

In the second chapter, instruction is given in the methods of seriation and in the graphic representation of results in the form of a "frequency polygon." A classification of curves is provided in the next chapter, and instructions are laid down for referring the constructed curve to its proper class. Chapter IV deals with correlation in variability; a method for determining the degree of correlation of two characters (as denoted by the value of the "coefficient of correlation") is described, and the application of this to the study of heredity is indicated.

Further applications of the preceding methods to the elucidation of other biological problems are suggested in Chapter V, and the work ends with a number of tables (logarithmic, etc.) for purposes of reference.

While not originally designed for special application to anthropological studies, it is becoming evident that the use of elaborate statistical methods will become more general in that science than has hitherto (with certain notable exceptions, *e.g.*, in the work of Galton, Stieda, *et alii*) been the case. There exists, however, the difficulty that the adequate treatment of results by the means indicated in *Statistical Methods* presupposes a degree of mathematical proficiency which is hardly attained to by the average student of biology at the present time; so that these methods of dealing with data are likely to possess lighter claims on the interest of the student than the work of observing and recording.

W. L. H. D.

OCCASIONAL PAPERS OF THE BERNICE PAUHI BISHOP MUSEUM OF POLYNESIAN ETHNOLOGY AND NATURAL HISTORY. Vol. I, No. 1, Director's Report. Honolulu, 1898. 72 pp.

In these pages Professor Brigham gives an account of a tour of inspection among the Ethnographical and Natural History Museums of the Continent, the United States and Australia, in the year 1896. His chief objects were to discover what material

from the Pacific Islands is preserved in the various cities he visited, and how this material was exhibited. A large proportion of the book is thus taken up with the enumeration of specimens, and this part need not here detain us. Special interest attaches to the criticisms which Professor Brigham has to make of the different establishments which he passes in review. Of the European Museums, that at Berlin naturally receives the highest praise, both for its extent and for its educational value; the Australian Museums are also deservedly commended. In speaking of our own national collections in London the writer is not unnaturally severe: one long gallery in a gloomy building subject to a London atmosphere is indeed inadequate to the needs of a maritime nation. "It is unfortunate for ethnology" says Professor Brigham "that so rich a nation as England should not find the means to build a palace worthy of the treasures her explorers have brought home, which are now laid aside for want of room in a museum where ethnology is of very secondary importance." A word of praise is given both to the Pitt-Rivers Museum at Oxford and the Fijian Collections at Cambridge, but the author laments the scattering of the material in different centres which enhances the difficulties of students. Professor Brigham returned from his voyage convinced that American Museums are better installed than any others, the American Museum of Natural History at New York being almost beyond competition. He shows a legitimate pride in the arrangements and scientific advantages of his own museum, which was visited two years ago by a Fellow of the Institute and found to be all that its Director claims for it, and more. One cannot fail to be profoundly impressed by the energy and the resource which has produced such great results in the far Pacific. The American people are showing an interest in ethnology which is making even the Germans look to their laurels, and which should make us doubly deplore the apathy and indifference which still reigns in the British Islands. The report contains a number of interesting reproductions of ethnographical specimens, and views of the Bishop Museum, and the Museums of Berlin and Vienna.

O. M. D.

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THE ONEIDA COMMUNITY. A Record of an attempt to carry out the principles of Christian Unselfishness and Scientific Race-Improvement. By Allan Estlake. Member of the Oneida Community. London: George Redway, 1900.

In most cases our knowledge of the history of Societies like those of the Mormons, the Shakers, or the Oneida Community is derived from writers like the late Hepworth Dixon, whose "New America," though written in a spirit so sympathetic as to bring forth some playful remarks thereon from Matthew Arnold in "Anarchy and Culture," was yet the work of an outsider. In this instance the author is a man convinced that the Oneida experiment is "the most valuable enterprise which has ever been undertaken since the foundation of Christianity," and that of the messengers of Christ John H. Noyes was the most important and central.

As a narrative this book is somewhat wanting in arrangement. Its interest lies in its presentation of the doctrines and practices of the Oneida Community from a staunch believer's point of view. The founder, John H. Noyes, originated the sect of Perfectionists, or Bible Communists, at Putney in Vermont in the year 1838. Leaving Putney in 1847, about 50 men of the sect, with as many women and children, settled at Oneida Creek. For thirty years the Community prospered in its new home. Then, in 1879, in deference to the public opinion of the people around them, they, on the advice of their founder, abandoned their communistic marriage system. In 1880 their communistic ownership of property was also given up, and Mr. Estlake tells us

that "the joint stock company (Oneida Community, Limited) which has succeeded to the businesses of the Oneida Community, is still in existence and prospering greatly."

We learn that in abandoning the practice of what outsiders called "free-love," but the Community "complex marriage," Mr. Noyes proposed a return "not to the *principle* but to the *practice* of monogamic marriage." Our author remarks that Noyes felt that "if a man cannot love a woman and be happy in seeing her loved by others, he is a selfish man, and his place is with the potsherd of the earth. There is no place for such in the Kingdom of Heaven." The departure from monogamy had been intended as a "dividing line between selfishness and unselfishness," not as an indulgence in licentious freedom. But we learn that many persons "knew so little about themselves, that while their great anxiety had been lest their wives should be unable to adapt themselves to the new relations, it turned out that they were themselves the first to become jealous and dissatisfied with the circumstances they had pleaded so hard and so long to get into." Then the extraordinary development of Criticism as a leading institution of the Community may have largely contributed to a backsliding towards monogamy. Our author remarks that only a man very earnestly desiring to improve his character welcomes criticism, and adds that "Criticism revealed all secrets, so that nobody was tormented with a skeleton in the closet; even lover's secrets that are usually considered too private for the light were freely considered in criticisms if they contained anything that shunned the light of truth . . . . Many well-meaning people, with the utmost consideration for others and the best of intentions, who through ignorance or innate obtuseness were unable to adapt their ways to the sensibilities of others, learned through criticism, much to their surprise and gratification, what they could not have acquired in any other way."

Thus it happened that "Many were ready to give up everything but the petty authority that they had been accustomed to exercise in their family circles; one may have been ready to have an enlargement of affectional happiness himself but could not concede the same freedom to other members of his family. Another could not cease to be the little autocrat and listen to his wife while, with others, she joined in criticising him."

Tobacco was tabooed in the Community in any form. Women did not like it as the "flavour of tobacco in any form was not conducive to the magnetism of a kiss." The alternative, that women also should smoke, was regarded as "not to be tolerated." Thus it becomes obvious that to many male members of the Community a return to monogamy would seem to have its compensation. For, as our author remarks (p. 42), "Criticism, which was the bulwark against the influx of selfishness, would become unavailable with the introduction of worldly marriage, for the wife would no longer feel free to criticise her husband publicly, nor would she tolerate his being criticised by others. The difficulties of the changed conditions may be enlarged upon almost indefinitely; suffice it to say that criticism must die when worldly marriage begins, and that it ceased under the changed conditions of the Oneida Community."

We do not gather from Mr. Estlake that the women of the Community were prominent in opposing the change from "complex marriage" to monogamy, though the first-named state "constituted each male member of the family husband of all the females, and each female the wife of every man," and women were permitted, and almost expected, to take the initiative in love-making. We have the following attractive picture of the complex marriage period:—

"Where women were left free to accept or decline approaches from men, life became a state of continuous courtship, both seeking to attract each other by

commending themselves to the highest ideal of the other by loyalty to truth and to community principles" (p. 90).

Possibly, however, the women who more or less appreciated the above state of things when the Community was founded, felt, twenty to thirty years later, that more was to be said for monogamy than they had once thought possible. It would seem indeed probable—to an outsider—that, as a rule, the privileges of complex marriage would be more appreciated by the elderly men than by the elderly women, where they were not a matter of indifference or of aversion to both.

Mr. Estlake thinks that the history of the Oneida Community will one day be studied "as a handbook and guide to communism, and the pages of history will portray John H. Noyes as a prophet of the new dispensation." No communistic scheme can succeed, he remarks, in which selfishness in any form appears, and he adds that:—"The sexual relationship of communists being pregnant with influences that are antagonistic to the first principle of communism, it should be one of the first subjects to be most carefully canvassed and satisfactorily disposed of before attempting to launch a socialistic enterprise." Those who do not "fearlessly follow the sexual problem to its logical solution deceive themselves and their followers while seeking to form a community with communism left out."

In short, this book is of unquestionable interest to anthropologists as the honest account of a thorough believer in the soundness of the principles on which the Oneida Community was originally based. This gives it a value of a somewhat rare kind, and one which the work of a much abler outsider could not possess.

T. V. H.

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THE ROYAL PUBLIC LIBRARY OF MALTA: a brochure by Dr. A. A. Caruana. Printed by authority of H.E. the Governor. Fcp. 15 pp., price 3d. Malta Government Printing Office, 1898. (Presented by the Author.)

This is a brief account of the historic buildings and collections of the Royal Public Library of Malta, which was founded in 1555, and continuously developed under the administration of the Order of St. John. The following extracts are characteristic: from 1800—the date of the British Occupation—to 1812, "the new edifice," built for the library and museum by the Knights of St. John, "was employed as a public coffee room for the British Officers," while in 1809 "several thousand volumes, belonging to that valuable collection, were rotting from want of accommodation" (p. 7), with the result that whereas in 1798 there were 60,000 volumes, there were only 30,000 left when Sir Henry Oakes, the Civil Commissioner, succeeded in installing them in their own building in 1812. The present collection contains some 53,000 volumes, including a considerable number of manuscripts. There is an interesting collection of local antiquities which is well worth a visit, as it includes the results of excavation in the prehistoric buildings of Hagiar Kim, etc., and the contents of a number of tombs of prehistoric, Græco-Phœnician, Roman, and Romano-Christian periods.

J. L. M.

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ANCIENT PAGAN TOMBS AND CHRISTIAN CEMETERIES IN THE ISLANDS OF MALTA, explored and surveyed from the year 1881 to the year 1897; by Dr. A. A. Caruana (late Director of Education and Librarian). Printed by order of H.E. the Governor. Fcp. 4to, pp. 129, many lithographed plates, price 8s. Malta Government Printing Office, 1898. (Presented by H.M. Secretary of State for the Colonies.)

Dr. Caruana is well known for the devoted study which he has given to the antiquities of the Maltese Islands; and he is greatly to be congratulated both on the appearance of these monographs, in which the results of some part of his work are



made accessible, and on the public-spirited way in which the Government of Malta has shown its appreciation of his services, both to anthropologists and archæologists at large, and to the education of his own countrymen.

The soft limestone of which Malta consists lends itself admirably to the excavation of chamber tombs; and though as much tomb-digging has gone on here, even in antiquity, as anywhere else in the Mediterranean, Dr. Caruana has been able to secure for the Malta Museum the contents of a number of unrifled tombs, as well as a most elaborate and careful series of ground plans and sections, which are here published in admirable lithographed plates. A number of types of "Phœnician" tombs are given, varying from a simple grave of tiles (Plate IV, 3)—in one instance a body is buried in two large clay jars set mouth to mouth—to the common cave-tomb closed by a slab, and approached either by a short *dromos*, or by a vertical shaft with or without steps or footholds: in one instance (Plate II, 4) the shaft comes down through the roof of the chamber. Chambers clustered round a central vestibule are not uncommon, and often bear, in ground plan, a striking resemblance to the arrangement of the megalithic monuments of Hagiar Kim, Mnaidra, and Gigantea. The bodies lie either on a shelf, or in stone coffins; or in a grave sunk in the floor; or simply on the ground, as in Cyprus. In this "Phœnician" class Dr. Caruana includes the great cliff-face necropolis of Ben Gemma (Plate VIII), which was recklessly rifled in 1874; he does not give any account of the fragments of their contents which may still be picked up on the site, and which suggest that some at all events are of the same type as the *tombe a fenestre* of Sicily, and the cave-tombs of Chaouach and other Tunisian sites, and therefore of indigenous type, and probably of earlier date than the Phœnician settlement in Malta.

The "Græco-Roman" tombs follow the same general plan as the "Phœnician"; but are, as elsewhere, more regularly cut, and better finished. Plate XIII gives a good example, with its funeral equipment intact. There is a curious series of bell-shaped chambers, with an orifice in the summit of each (Plates XV, XVI), the type of which can hardly be that of a tomb originally. They look more like a common type of cistern or store-house, which again may be paralleled on the African coast opposite. But the three-storied example on Plate XVI was certainly used for burial.

The Christian tombs (among which probably are included some late Roman examples), develop out of the clustered-chamber type into regular catacombs with narrow-resting places and columbaria. Of these the best examples are found in and near the Roman and mediæval capital of Melita, at Citta Vecchia or Rabato (of which a useful plan is given on Plate XXI), and wander under the town for considerable distances. A few inscriptions and traces of painting occur, and are duly recorded by Dr. Caruana.

The only matter for regret is that so few detailed descriptions are given of objects found in the various classes of tombs. It is always exceedingly difficult to date rock tombs merely by their form; and a few well-drawn—or better, photographed—examples of the pottery and other tomb-furniture would have been invaluable. But perhaps we may be allowed to hope that this aid is only postponed, and that Dr. Caruana will some time be able to give us a companion volume on the contents of the Valetta Museum.

J. L. M.

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THE HARMONIC STRUCTURE OF INDIAN MUSIC. By John Comfort Fillmore. New York: G. P. Putnam's Sons, 1899.

This pamphlet is an ingenious and interesting defence of a wholly untenable position. It is written with evident conviction; it is supported by examples drawn

from ten years' study of the North American Indians; it deserves all the consideration which belongs to first-hand evidence; but, unfortunately, the interpretation of the evidence is not borne out by the known facts of Musical History and Ethnology.

Professor Fillmore's thesis may be stated in the following propositions (see pp. 304, 315, 318): (a) That "Folk-melody is always and everywhere harmonic melody"; (b) That "the first harmonics to be displayed are those of the tonic and its chord"; (c) That the primitive scale, all the world over, was the pentatonic, and that from this, by natural growth, our diatonic scale was developed; (d) That "in every stage of its development the harmonic sense is the determining factor in the production of folk-melody," the harmonies being those proper to our diatonic major and minor scales; (e) That "in short there is only one kind of music in the world."

We fear that every one of these propositions is demonstrably incorrect. Our diatonic scale is a highly artificial and civilised product: it is derived not from the pentatonic but from the Greek tetrachord, and every stage in its development is historically traceable. There is no evidence that the "tonic chord" had ever been heard of until long after our scale was established: there is conclusive evidence that the Greeks at any rate knew nothing about it. Many known scales are not diatonic at all, *e.g.*, the Persian; some, *e.g.*, the Siamese, do not contain the perfect fifth which is necessary to Professor Fillmore's "first harmony": others, like the two Javese gamelans, contain no single interval on which an intelligible harmonic system could be based. Indeed, the harmonic sense is so far from being the determining factor in the production of folk-melody, that even among European nations it is a late growth, and among many non-European nations it is absent altogether.

In his citation of Indian folk-songs Professor Fillmore has implicitly surrendered his own case. The harmonic treatment of one example (pp. 309, 310) requires five modulations in twelve bars—modulations being virtually unknown in Europe three hundred years ago. Another (p. 309) contains a note foreign to the diatonic scale which has to be explained on a system so elaborate that it could not have existed in civilised music before the time of J. S. Bach. That "the Indian prefers the harmonised to the unharmonised version of his songs" is no conclusive evidence. Experience has shown that this is true of other primitive nations, and that the pleasure derived from the mere fulness of sound, is in no way impaired if the harmonies are manifestly incorrect, or even if they are in a different key from the tune. We have seen an audience in Sarajevo listening in rapt delight to a folk-song of which the melody was played in F and the bass in B $\flat$ . And in any case it would appear incredible that the Indians should recognise, or specially prefer to their own music, the unprepared sevenths and thirteenthths with which some of Professor Fillmore's examples are harmonised. If their acceptance of these was due to any intelligent selection they must be wholly exceptional among primitive nations. Indeed, the whole case for the primitive harmonic sense must be regarded, at best, as not proven. A far stronger body of testimony is needed before we can disallow an induction that has been established on facts from almost every quarter of the world.

W. H. H.

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TEXT-BOOK OF PALEONTOLOGY. By Karl A. von Zittel. Translated and edited by Charles R. Eastman, Ph.D. Vol. I, with 1,476 woodcuts. London: Macmillan and Co., 1900. 8vo, pp. 706. (Presented by the Publishers.)

Soon after Professor von Zittel had completed his magnificent *Handbuch der Paläontologie* he prepared a smaller work giving, in a single volume, an admirable

epitome of the subject. This appeared, in 1895, under the title of *Grundzüge der Palæontologie*. Dr. Eastman, of Harvard, at one time a student under von Zittel, at Munich, undertook the preparation of an English edition of this excellent work; but he soon modified his original plan of a literal translation, and was led, with the author's consent, to enlarge the scope of the work and to remodel a large part of it. In this labour he has been assisted by a staff of specialists. But it has not been possible for the editor to secure uniformity in the work of his contributors; some being content to adhere to the original, whilst others have taken great liberties with the text, and have introduced radical departures from the primitive plan. Hence, some chapters of the translation follow closely the German, whereas others have been completely recast; thus, the section on the Cephalopoda has been rewritten by Professor Hyatt, and though his views and those of von Zittel are sometimes at variance the German professor has graciously bowed to the American authority.

The present volume, extending to 706 pages, deals only with the Invertebrata, and the student of anthropology will anxiously await the appearance of the second volume, which will be devoted to the Vertebrata. Meanwhile, he may read with advantage the admirable introductory chapter dealing with the scope of Palæontology and its relations, on the one hand to Geology and on the other to Biology. Professor von Zittel's work is admitted to be our best guide to a knowledge of the varied forms of life which existed on our planet in the past.

F. W. R.

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THE CEPHALIC INDEX. By Dr. Franz Boas. (Reprinted from the *American Anthropologist*, N.S., I. July, 1899, pp. 448-461.) (Presented by the Author.)

In this paper the author discusses the biological significance of the cephalic index; he finds it greatly influenced by causes other than the length and breadth of the head. Thus it appears that the length of the head is more influenced by stature than the breadth of the head. "Correlation between breadth of face and horizontal diameters of the head shows the transversal diameters to be very closely correlated, while the length of the head is more closely correlated with height of face." The influence of cranial capacity on the form of the skull is next considered, and the author concludes that Virchow's law of compensation applies equally to normal as well as to pathological skulls. The correlation between the length and breadth of the skull is not an expression of a biological relation between the two measurements, but an effect of the changes which both undergo when the capacity of the skull increases or decreases. "It follows from these considerations that while the cephalic index is a convenient practical expression of the form of the head, it does not express any important anatomic relation. On the other hand, the relation between capacity and head diameters is found to be of fundamental importance, and among these the relation between transversal diameters and capacity is most significant. Since in measurements on the living we are unable to measure the capacity of the head, it is necessary to find a substitute. It would seem that circumferences are the most available means for judging cranial size. Therefore such circumferences should be included in all anthropometrical schedules designed to investigate racial characters.

A. T.

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A STUDY OF THE NORMAL TIBIA. By Ales Hrdlička. Reprinted from the *Proceedings of the Association of American Anatomists*. XI Session. New York City. Dec. 1898. 6 pp. (Presented by the Author.)

The material at the disposal of the author comprised 2,000 bones of whites, 80 of negroes and 520 of North and Central American Indians. The principal differences

observed were those affecting the form of the shaft, these the author tabulates under six varieties, and promises further information regarding the significance of the various shapes, though he admits that the enquiry is beset with difficulties, for he found equal variety in the form of the bone in women and young adults, and met with quite as many different types on weak as in strongly developed bones. Advanced platynemy was very rare in both the whites and negroes, but frequent in the Indians, whilst a pronounced backward inclination of the head is common in Mexican Indians.

A. T.

DESCRIPTION OF AN ANCIENT AMERICAN SKELETON FROM THE VALLEY OF MEXICO; with special reference to Supernumerary and Bicipital Ribs in Man. By Ales Hrdlička. (Reprinted from *Bull. Am. Mus.* N.H. xii. 81-107. New York. May, 1899.) (Presented by the Author.)

The skeleton which Dr. Hrdlička describes was discovered about three metres from the surface in an adobe deposit at St. Simon Tonaquac, a small suburb of the city of Mexico. The principal points of interest in connection with it were the occurrence of a pair of supernumerary ribs, the very high relative lengths of the bones of his forearm and leg, and the peculiarity of the lower jaw. The cranial capacity was small, the humeri were pierced at the olecranon fossæ, and the head and articular facets of the tibiæ were much recurved. After discussing the significance of these structural features, the author admits that in the present state of our knowledge it is impossible to say whether the skeleton be that of a Toltec or an Aztec.

A. T.

A BIBLIOGRAPHY OF PHYSICAL ANTHROPOLOGY.

*Jahresberichte der Anatomie und Entwicklungsgeschichte.* By Professor Dr. Emil Schmidt. *Physische Anthropologie.* 1898. XII. pp. 567-646. (Presented by the Author.)

All who work at the subject of physical anthropology owe a debt of gratitude to Professor Schmidt, for here not only do we find a marvellously complete reference to the articles, to the number of 542, which have appeared during the year, but we are also furnished with a series of abstracts which practically embody all the recent advances made in this subject.

A. T.

KATHETOMETRY. *Weitere Kathetometrische Studien.* Von Professor Dr. Moriz Benedikt. *Archiv. f. Anat. u. Phys. (Anat. Abth.* 1899) 353-388. (Presented by the Author.)

This paper embodies the results obtained by the author through the use of a modification of the stereograph. The subjects particularly dealt with refer to the growth and form of the tibia and femur, with especial reference to the movements of the knee and hip joints.

A. T.

ON SOME FLINT IMPLEMENTS, FOUND IN THE GLACIAL DEPOSITS OF CHESHIRE AND NORTH WALES. By Joseph Lomas, F.G.S. 8vo, pp. 14, with one photographic plate. Liverpool. Thos. Brakell, Ltd., 1899. (Presented by the Author.)

This paper was read before the Historic Society of Lancashire and Cheshire, and the Liverpool Geological and Biological Societies, on December 9th, 1898. It contains an account of chipped flints found (1) at Spital Sandpit Cheshire, (2) at Prenton, near Birkenhead, (3) at Moel Tryfaen, N. Wales; and two opinions of their origin. Sir John Evans is reported as saying—"No. 7 may be artificial. Of the others, Nos. 2 and 3 look the most possible; but the signs are not such as can confidently be



relied on. If man existed in pre-glacial times in Britain, it is, I think, probable that his tools would have been of larger proportions." Mr. W. J. Lewis-Abbott, after a detailed discussion of each fracture, sums up in favour of an artificial origin. The photographic plate gives two views of No. 7, above quoted, two of No. 2, and one each of No. 3 and No. 1.

J. L. M.

EXPLORATIONS IN PATAGONIA. By Dr. F. P. Moreno. 8vo. pp. 54: map and photographic views, reprinted from the *Geographical Journal*, September-October, 1899. (Presented by the Author.)

A detailed sketch of the physical geography of Patagonia by a pre-eminent authority. Pages 46-47 (= *G. J.*, XIV, 370-2) contain notes on the population. "The whole of this vast region is very thinly peopled: even the Indians, never very numerous, are dying out, and colonization has not progressed as it should have done. . . . Here and there the traveller finds a Tehuel chian, or Gennaken encampment, but natives of pure race are now very scarce. It would be difficult to gather together fifty-five Tehuelches, and the number of Gennahens cannot be much greater. The remaining native population is composed of the ancient Araucanian race, or a mixture of the three races. But these do not represent the only type of human beings which have dwelt in Patagonia. In ancient burial-places I have collected the remains of other—now totally disappeared—races, which were quite distinct from the present ones, but which greatly resembled the primitive types met with more to the north, in the Chaco and in Brazil, while others strongly resemble some Pacific races, possessing ethnic characteristics which have not been observed in South America. Among these remains, every type of artificial deformity of the skull hitherto known is found; while to-day the natives only preserve the occipital deformation. This variety of extinct human types should of itself form the subject of a serious investigation. Patagonia is the extremity of the American continent, and has been the last refuge of more than one people in their forced exodus." May we perhaps hope that Dr. Moreno, who is an Honorary Fellow of this Institute, may find the opportunity of continuing and publishing the valuable observations which he has thus briefly summarized.

J. L. M.

A PRELIMINARY REVISION OF THE EVIDENCE RELATING TO AURIFEROUS GRAVEL MAN IN CALIFORNIA. By W. H. Holmes. 8vo. Reprinted from the *American Anthropologist*, N.S. L. pp. 108-121 and 614-645, with plates and diagrams.

These two papers review critically and in great detail the evidence now available (1) for the reported discovery, at various times, of implements, etc., of advanced workmanship in the auriferous gravels of Tertiary Age in California, (2) for the discovery and subsequent history of the well-known "Calavera skull" from the same district. The case *against* the view that the objects in question were really found in the auriferous gravels is put with great skill and apparent cogency; and we shall await with interest the reply of those who hold the other opinion.

J. L. M.

VINLAND AND ITS RUINS. Some of the evidences that Northmen were in Massachusetts in pre-Columbian days. By Cornelia Horsford (reprint from *Appleton's Popular Science Monthly*, Dec. 1899. Presented by the Author).

Miss Horsford considers that Vinland, the Wineland of the first European discoverers of North America, was round the harbour on which Boston now stands, and prefers this site to Rafn's chosen position of Mount Hope Bay, and to others that might be suggested by the texts of the two versions of the discovery that Icelandic

MSS. have preserved for us. She next proceeds to compare the results of recent excavations in Iceland with the results of explorations made at Cambridge, Mass., near Gerry's landing; and she adduces the testimony of Waltyr Gudmundson and Thorsteinn Erlingsson, experienced Icelandic antiquaries, to the likeness between the Cambridge remains of houses and paths and the remains of old houses and paths in Iceland. They agree that, as far as regards "construction, both the house . . . and the two paths . . . could be of Scandinavian origin," and says Thorsteinn Erlingsson "what is left of the walls here nobody could distinguish from Icelandic walls" . . . "though some of the stones seem rather small." That neither of those gentlemen will say absolutely "This is an Icelandic house!" is owing to the fact that "pieces of pottery and bricks have been found beneath the stones which had fallen down from the walls and on the floor itself," and that bricks have been found between the stones that form the paths, bits of evidence that "seem rather to speak for a post-Columbian origin." Miss Horsford considers that the characteristic walling of stones and turf, the peculiar paving, resembling the Icelandic *sjávar gata* (quite unlike those found at Fort Wm. Henry near Pennequid, Maine, and many other places in the New England States), make strong evidence for her theory: the presence of the brick fragments in house floors and paths may be accounted for by the presence of cattle that have trodden them in, and she further points out that the square cooking-place discovered here is entirely different from the round Indian firehearth, and entirely like those discovered in Iceland. Her thesis is not proven, but there is nothing impossible in it as far as it goes. The illustrations she gives, processed from photographs, are helpful.

F. YORK POWELL.

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HAWAII NEI. By Mabel C. Craft. 8vo. Price 6s. San Francisco: published by William Doxey, 1899.

This work is the outcome of a lady's visit to the Hawaiian Islands "on the eve and immediately following" the formal transfer of the group to the United States. A few chapters have been abridged from contributions to the American press. The writer may be said to "hold a brief" for the monarchy as against annexation, which she compares to a successful Jameson raid. *Hawaii Nei* makes an excellent sequel to Mr. C. G. Nottage's *In search of a Climate*. In addition to this vexed question, Miss Craft gives a very interesting account of the islands and of the natives, ending up with a chapter on "Legends and Folk-Lore." The work is well illustrated with photographic reproductions of ethnographical interest.

J. E. P.

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A DICTIONARY OF THE PATHAN TRIBES OF THE NORTH-WEST FRONTIER OF INDIA. Calcutta, 1899. Small 8vo.

This useful little book, labelled "Political and Secret Department," has found its way from the India Office to the Anthropological Institute.

No important secrets are, however, contained in it. It is simply a reference to the innumerable clans, tribes, and tribal sub-divisions of the great Pathan community of the North-West Indian frontier, with a map to show where to locate the principal sections into which they are divided.

To the ordinary reader of Indian frontier current history tribal designations must be a severe stumbling block in the way of intelligent comprehension of the course of events; and a dictionary of this nature, if it is to be placed in the hands of the public, will do much to remove the difficulty. But there is no reason why it should not be made more comprehensive. The Pathan, or Pukhtu-speaking communities include

peoples of most diverse nationalities and wide-spread origins; and it would not be difficult to differentiate between them—to separate those of Afghan from those of non-Afghan origin, for instance. In some cases this is attempted. The Mohmands are relegated to the “pure Afghan” communities, but there is no record about the Tusupzais, who are a larger tribe and who claim to be as pure Afghan as the Mohmands. A few lines about the Afghans generally would have been useful, but nothing is said about them as a distinct nationality. On the other hand, the Ghilzais are called “a large and wide-spread Afghan tribe;” with which designation no modern authority will agree. The Ghilzais are of Turkish extraction. It is impossible to apply the name “Afghan” to the dwellers within the political boundaries of Afghanistan—for there are large numbers of Duranis and of Mohmands who live on the British side of the boundary, to say nothing of the Tusupzais.

As regards the numbers which are quoted after the names of the clans, it is difficult to say whether they refer to the fighting strength, or to the entire population. What does (15) mean after Ghazizai for instance? Or (10) after Kasam Khel? As a Quarter-Master-General's publication it probably refers to the fighting strength of the tribe or section; and yet the numbers in many cases appear to be impossibly large; as in the case of the Afridis, who certainly cannot maintain a population which would put 26,000 fighting men into the field within the restricted areas which they cultivate.

The dictionary is hardly compiled on scientific principles; still it is the first of its sort which has been made public, and we hope it is the precursor of a larger and more complete work of the same nature. It is only lately that we have acquired sufficient knowledge of the frontier tribes to justify any attempt at classification; so that we must not expect too much. A similar dictionary of the Parsiwan or Persian speaking tribes (which would include all Baluchistan) would be almost equally valuable.

T. H. H.

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ON THE ORIENTATION OF TEMPLES, being the Results of some Observations taken in Greece and Sicily, in the month of May, 1898, by F. C. Penrose, M.A., F.R.S., F.R.I.B.A., etc. *Proc. Roy. Soc.*, lxc, pp. 370-375 (1899).

This paper is supplementary to those which Mr. Penrose contributed to *Philosophical Transactions*, vol. clxxiv, pp. 805-834 (1893), and vol. cxc, pp. 43-65 (1897). Arguing on the assumption that the axis of each temple was made to point to the rising sun on the day of the principal function in the temple, and that a date was chosen for that function when the heliacal rising or morning setting of a star, also in a line with the axis of the temple, might serve to give warning of the Sun's approach, he has attempted to fix the dates of foundation of a number of Greek Temples, and also the time of year when the principal religious function took place in each. The present paper begins by setting forth the results of some confirmations or corrections of the author's former observations. The only case in which these necessitate a material alteration in his conclusions is that of the Temple attributed to Juno Lucina, at Girgenti, which he had assigned to 690 B.C., but now assigns to 490 B.C. This is followed by a calculation of the date of the Temple of Neptune, at Calauria, and by some details of other calculations of which the author had hitherto published only the results. Finally he attempts to fix the exact dates of foundation of the Theseum and the new Erechtheum at Athens, and to confirm the traditional name of the former by finding a correspondence between the dates astronomically discovered for the principal functions in those temples, and the calendar dates of the festivals of the Thesea and the Niceteria.

The chief difficulty in the way of accepting Mr. Penrose's conclusions is the want of evidence to support his fundamental assumption. The calculations have been made with great care, and one cannot praise the author too highly for the pains he has taken to collect local data, such as the altitude of the visible horizon and the conditions of visibility of different stars in the climates of Greece and Italy, data which are of the highest importance in such nice calculations. The only material error in the calculations appears to be in the conversion of the Sun's declination and right ascension into a calendar date, where Mr. Penrose would appear to have followed some recent almanack without making the necessary corrections for a distant date. His dates in the fifth century before Christ are in consequence from six to eight days too early, and the synchronisms between the astronomical and calendar dates of the festivals do not therefore hold for the years which he suggests. Elsewhere this error would appear to be of no importance.

J. K. F.

DESCRIPCION HISTORIA Y EXPOSICION DEL CODICE PICTORICO DE LOS ANTIGUOS NAUAS que se conserva en la Biblioteca de la Cámara de Diputados de Paris, por Francisco del Paso y Troncoso, Director del Museo Nacional de México. Florence, 1898. 368 pp. 8vo. (Presented by the Author.)

In this work Señor F. del Paso y Troncoso gives a commentary of a singularly interesting pictorial MS. on agave-paper preserved in the library of the Chamber of Deputies at Paris. The manuscript is a ceremonial calendar, treating of the feasts proper to different seasons of the year, and Señor Troncoso discusses each of the thirty-seven pages in detail. His commentary will be read with additional interest as soon as the reproduction now promised us has been issued. As a compliment to the learned Director of the Trocadéro, Señor del Troncoso proposes to name the MS. the Codex Hamy. In some interesting prefatory remarks, the author relates the history of the MS. which was formerly in the Escorial and was probably removed to France in the early years of the nineteenth century. About 1780 it was discovered by the Rev. Mr. Waddilove, Chaplain of the British Embassy at Madrid; he communicated his discovery to the historian Robertson, who noticed it in one of the later editions of his *History of America*. Señor Troncoso suggests that the communications of Waddilove may still exist among the papers of Robertson, and that if this is the case, further information as to the facts of the discovery may yet be forthcoming. He commends the search to any of our countrymen who are interested in the study of American Antiquities.

O. M. D.

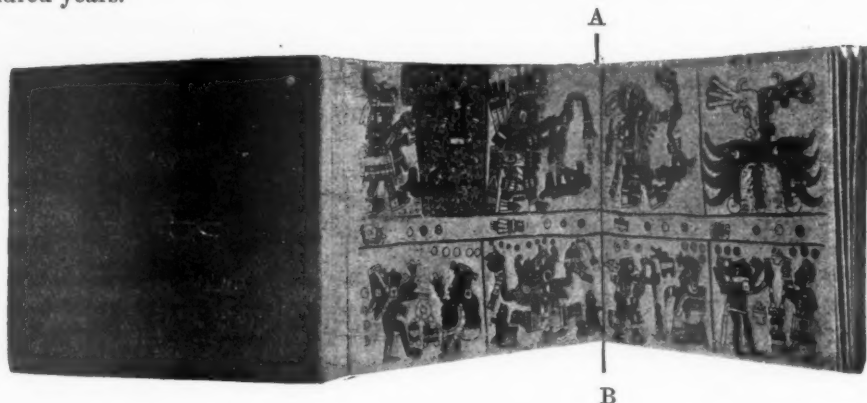
REPRODUCTIONS OF NAHUA MANUSCRIPTS. By Francisco del Paso y Troncoso.

The attention of all Anthropologists interested in the ancient civilisations of America should be drawn to the magnificent series of reproductions of Mexican manuscripts now being issued by Señor del Paso y Troncoso and Professor Hamy, under the auspices of M. le Duc de Loubat. The codices already issued are five in number, namely the Vatican MS., 3773, known as the Codex Fabrégas; the Borgian MS. in the Museum of the Propaganda; the Codex Cospianus in the Library of the University of Bologna; the Codex Tellerio-Remensis in the Bibliothèque Nationale, Paris; and the Vatican MS., 3738, known as the Codex Rios, the two last being posterior to the Conquest, and provided with a commentary in Spanish. This series of facsimiles is of quite remarkable excellence, the most minute peculiarities of material and colour being reproduced with surprising fidelity.

The advance made since Lord Kingsborough's time is enormous, and students can now consult facsimiles on the accuracy of which they can confidently rely.



Through the munificence of M. le Duc de Loubat, who has in this matter proved a veritable Maecenas, the principal libraries of the world have been provided with each number of the series as it appears. From many points of view the MS. first mentioned is the most interesting, for it is still contained in its original wooden covers, formerly set with turquoises, of which only one now remains. The reproduction in this case gives us therefore an exact idea of the books from which the Nahua priests derived their ritual and astronomical lore, before Cortes overthrew the Empire of Montezuma. It may be added that M. le Duc de Loubat has himself rediscovered and published the "Clave General de Zeroglificos Americanos" of Don Ignacio Borunda, lost to sight in the archives of Notre Dame de Guadalupe for a hundred years.



The accompanying illustration will give some idea of the appearance of the smallest MS.—the Vatican Codex, 3773. It is on skin, painted on both sides, and opening like a folding screen. It is inclosed between two wooden covers, of which that which is shown in the photograph is the front. In the right-hand top corner of this cover can be seen inlaid a small stone resembling turquoise, while in the left-hand bottom corner is the cavity left by a similar stone; the marks seen in the middle of the cover are in all probability also those of other stones now lost. The other cover is left unornamented, from which it may be gathered that the end of the MS. is at this side a matter of some importance, for without some such clue it is difficult to say where some of these MSS. begin. The length of the covers is six inches. The line A B marks a fold in the manuscript.

O. M. D.

DECADES AMERICANÆ, MÉMOIRES D'ARCHÉOLOGIE ET D'ETHNOGRAPHIE AMÉRICAINES. Par le Dr. E. T. Hamy, 3<sup>e</sup> and 4<sup>e</sup> Décades. Paris, 1898. 4 Plates. 23 illustrations. 211 pp. (Presented by the Author.)

The above work is the second instalment of a series of papers on American Archaeology and Ethnography, arranged as the name implies in groups of ten. The greater number have already appeared in various publications, chiefly in the *Revue d'Anthropologie* and in the *Journal de la Société des Américanistes de Paris*. Dr. Hamy has conferred a distinct service on students of American ethnology by bringing together in one volume these useful essays. The subjects treated are very various and deal with almost all parts of the Continent. We have the history of explorations, ethnographical papers on Alaska, on the Jivaro Indians, on ancient Mexico, on Huron Wampum, etc., and on a memoir on the prominent part played by France in investigating the ancient civilisations of Mexico and Central America. The volume is provided with an index and table of contents.

O. M. D.

TANGWEERA: *Life and Adventures among gentle Savages.* By C. Napier Bell, M.Inst.C.E. London: Arnold, 1899. 8vo. (Presented by the Author.)

The author of this book, now employed as a Civil Engineer in New Zealand, has given us a very interesting and graphic account of his adventures as a youth among the Mosquito Indians. He tells us that he was in the habit of writing all that he saw or heard, and these notes he has now arranged in his old age. It is certainly remarkable that a mere boy should have so patiently recorded his varied experiences, and to an ordinary reader some suspicion must inevitably arise, which the form of the narrative does not completely dispel. There is a remarkable absence of dates, and we have no map defining the routes of the author's wanderings. It might, as the author admits, have taken the shape of a boy's book, and obviously the form in which it has now been compiled robs it of some of the authority which it would have otherwise secured for scientific readers. With these reservations it is certainly a most interesting account of a people of whom we have little trustworthy information.

The Mosquito Indians are a maritime race, a colony sprung from the Caribs of the West Indies. Their country extends "from the Black River, 100 miles west of Gracias à Dios, to the river San Juan del Norte, which flows into the Caribbean Sea at the port of Greytown, where the Nicaragua Canal is to commence." They call themselves Tangweeras ("straight-hair") to distinguish them from the half-breed Sambos who speak the same language. Like all savage races confronted with the higher culture, they show a decided tendency to decrease in numbers, a process facilitated by the abandonment of British control over them in 1856, since when they have come under the dominion of the republics of Nicaragua and Honduras.

We have no detailed account of their religion and customs. They display the usual animistic beliefs characteristic of savage life, the only conception of a god being Alwaney, the great spirit of thunder, at whose bidding alligators, iguanas, tortoises, and sea-turtle, all hasten out of the egg.

I can barely refer to some of the anthropological facts which the author incidentally mentions. Like many savages they salute their relations on their return after protracted absence, with a dirge-like song; but it is thought improper for women to display any emotion on the arrival of their husbands. The dead are buried in a canoe, which is cut in half to form the top and bottom of the coffin. Food, weapons, etc., are laid with the dead, and periodical offerings are made at the grave. They have a well-organised feast of the dead. "Very frequently, when a man dies, they cut down his fruit-trees, burn his house and clothes, split up his canoe, and sell his wife; that is to say, if another man takes her, he must pay the relatives of the late husband for the expense and labour he has devoted to her. Thus, the children inherit nothing but the debts, which are not forgotten to the second or third generation. In addition to this, the bereaved relatives are urged to give feasts of the dead, and an entire plantation of cassava may be consumed in a single night's debauch" (p. 95).

The dress is gaudy. "The bracelet round the leg below the knee is sacred to love, and it is bad manners to allude to a young man's knee-clasp or to question him about it. Yet, when young men meet, those who know of this custom can always see them glance at each other's knees; and often a girl is seen hurriedly to conceal a piece of bead-work she is engaged in plaiting" (p. 128).

Morality is of the easy-going type, and both prenuptial incontinence and intertribal immorality seems to be lightly regarded.

Many are adepts in charming the wind and controlling storms. Killing the Coongcoong monkey is sure to bring rain. "That monkey belongs to the water

spirit and it will be very angry if the beast is slain" (p. 183). The forest owl has demoniacal characters, and its claws are hung round the necks of children as a charm. The red-hump blackbird is the guardian of love, and whoever molests them will never be fancied by any girl. The forest birds are the poultry of the spirits and if molested something awful will happen. The rock-snake cannot abide an *enceinte* woman, but attacks her at once. Spirits have a like repugnance, "so that a Sookia, or medicine-man, while communicating with spirits or preparing incantations, must on no account see a woman in such a condition, the inference being that this snake is connected with spirits" (p. 225 *seq.*).

Rheumatism is caused by thorns which evil spirits have stuck in the flesh and these are pulled out by the sorcerer (p. 240). W. CROOKE.

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THE NATURAL HISTORY OF THE MUSICAL BOW. A CHAPTER IN THE DEVELOPMENTAL HISTORY OF STRINGED INSTRUMENTS OF MUSIC. By Henry Balfour, M.A. Curator of the Pitt-Rivers Museum, University of Oxford. Oxford Clarendon Press, 1899. Price, 4s. 6d. 8vo. 87 pp. 61 illustrations.

This is the first part of a monograph, and is concerned with the primitive types; the second part, which is not yet published, will deal with more highly developed instruments. The writer shows how the first stringed instrument was the bow with its twanging string, and how gradually additions and improvements were made, by means of which the original weapon was transformed into an instrument with no other function than to make sweet music. The numerous cuts which illustrate the text, make the nature of the transformation abundantly clear, and the localities in which the musical bow is actually in use, or in which it is recorded as a legendary prototype, are carefully noted with numerous references to the literature of the subject. A coloured map at the end exhibits at a glance the distribution of these interesting objects, showing their occurrence in Africa, India, the Asiatic Islands, Melanesia and Polynesia, and Central and South America. It is unnecessary to point out the importance of studies of this kind which retrace the phylogenetic development of instruments of art or industry, and enforce the lesson that almost everything we use in daily life is the product of an infinitely slow growth. The Pitt-Rivers Museum is a school which exists for this purpose; and its accomplished curator, by publishing in an attractive literary form any of the admirable series under his control, is fulfilling in the best possible manner the desires of the founder and of all students of ethnographical science. O. M. D.

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MEMORIES OF THE PICTS. By D. MacRitchie. Reprinted from the *Scottish Antiquary*, January, 1900. (Presented by the Author.)

The writer insists on what may be termed the fairy aspect of the Pechts, especially their living underground in rooms so small that the occupants must have been men of very small stature. So he argues partly on the ground of the ascertained dimensions of some of those rooms and partly also on the statements of Thomas Tulloch, who appears to have been governor of Orkney in 1422-48, under the Scandinavian monarch Eric VII. of Denmark. He cites other authorities also, and we feel far from certain that the Pictish underground dwellings did not have something to do with Gildas' picture when he wrote "*..... emergunt certatim de curicis, quibus sunt trans Cichicam vallem vecti, quasi in alto Titane incalescentique caumate de arctissimis foraminum cavernulis fusci vermiculorum cunei, tetri Scotorum Pictorumque greges,*" etc.

This is not the first time that Mr. MacRitchie has touched on the Pechts; but we note with satisfaction that he has now dropped certain arguments which seemed to us, so far from helping him, to have been prejudicial to his position. J. R.

THE ETHNOGRAPHY OF THE NORTH-WESTERN SOLOMON ISLANDS. By R. Parkinson.

Herr R. Parkinson has an unique knowledge of several districts of Melanesia, and he has recently contributed a very valuable paper on the Ethnography of the North-Western Solomon Islands to the *Abhandl. u. Berichte d. K. Zool. u. Anthropol. Mus. zu. Dresden*, Bd. VII, 1899. In Buka there are two clans which take the name of their totems. These are the Fowl and the Frigate-bird; one clan must marry into the other. In North Bougainville the same obtains, but in South Bougainville and in the neighbouring islands there are a number of bird clans; here a member of a clan may marry a member of any other clan except that to which he or she belongs. In all cases the children belong to their mother's clan.

Interesting information is given about ceremonies in which masks are employed. The important *Rukruk* custom (sometimes also called *burri*) is described; it takes place in a tabued clearing in the bush, where there is a sacred hut; here the bull-roarer is whirled, and the women believe that the initiates (*matasesen*) have converse with the male and the female spirit (*ruk*).

The long hair of the initiates is cut off, but as a rule a long lock is left on the nape, the end of which is decorated with beads or a shell. After the ceremony the *matasesen* may choose a wife. Parkinson compares the Solomon Island *rukruk* with the *dukduk* of the Gazelle Peninsula of New Britain, where, however, the bull-roarer is unknown. Cannibalism is not so universally spread as is believed. Scarification occurs all over the district; it enhances personal attraction in both sexes. As Parkinson deals with music, houses, clothing, ornaments, money, utensils, weapons, canoes, fishing, etc., it will be apparent that this memoir is of considerable importance, especially when one remembers that the author has peculiar facilities for gaining trustworthy information. A. C. H.

BEITRÄGE ZUR ANTHROPOLOGIE ELSSASS-LOTHRINGENS. Herausgegeben von Dr. G. Schwalk, Professor der Anatomie an der Universität Strassburg. ERSTES HEFT. *Die Schädelformen der Elsässischen Bevölkerung in Alter und Neuer Zeit.* Von Dr. Edmund Blind. ZWEITES HEFT. *Die Körpergrösse der Wehrpflichtigen des Reichslandes Elsass-Lothringen.* Von Dr. S. Brandt.

This work, of which the first two instalments are now available, will comprise a complete inquiry into the physical characteristics of the inhabitants of the German frontier provinces. Such a work comparable to that done by Ammon and Ecker in the Rhine Provinces, by Ranke in Bavaria, and by Topinard, Collignon, and many others in France, is of the utmost value to the anthropologist. Elsass-Lothringen having been from time immemorial one of the great battle grounds of Europe, it is surprising that the anthropological landmarks should remain as distinct as they do.

In the first part Dr. Blind gives a detailed account of some 700 skulls, mostly dating from the 14th-16th centuries, obtained from various ossuaries in Elsass. He concludes that in the main they indicate that at this period a brachycephalic, leptorhine, and megaseme population was spread out over the Vosges, mixed here and there with long-skulled elements coming from across the Rhine valley. The skulls of this people closely resemble, if indeed they are not identical with, those of Celts from Auvergne described by Broca, and those of the broad band of brachycephalous



individuals which stretches across the Alps from the lake of Geneva to the borders of inner Austria.

In the hills a nearly pure black-haired, dark-eyed, small-built people, with a peculiar patois can still be distinguished, though in the plains and towns the populace is very mixed. His paper is illustrated by tables, reproductions of skulls, and a useful sketch map.

In the second part Dr. Brandt has worked out a lengthy series of investigations into the height of the population, canton by canton, comprising altogether observations on 105,561 individuals.

In his summary he shows that the highest average height is met with to the East in the Rhine Valley and to the south, while in the centre, near the summits of the Vosges, the average cantonal height falls considerably. A sudden rise in average height in the cantons of Münster and Wruzenheim he explains by the comparatively recent immigration of Swiss dairy farmers into the fertile pasturage of the valley of the Fecht.

The author concludes that in the northern part of this district one meets traces of Franks, in the Rhine Valley of Alemanni, and to the south of Burgundians, who have forced their smaller and weaker predecessors to take refuge in the inhospitable depths of the forests clothing the slopes of the Vosges mountains.

Dr. Brandt traces the history of Elsass-Lothringen from the stone age to the present time, and has profusely illustrated his monograph by maps and tables.

F. C. SHRUBSALL.

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PUBLIC MUSEUM OF WANGANUI, NEW ZEALAND. Fourth Annual Report of the Hon. Curator. 8vo, pp. 32, photographic illustrations. Wanganui, N.Z., 1899. (Presented by the Curator.)

The Trustees of this Institution are to be congratulated on the rapid progress made during the last twelve months. In this period the size of the Museum has been doubled, and much valuable material added by presentations. The Curator, however, complains that want of funds prevents him from adding to the already valuable Maori collections by purchase, but at the same time, where possible, he is anxious to make exchanges with other museums.

The Report contains illustrations of the new buildings and of some of the Maori exhibits, together with a full list of donors, numbering 140, from 1st July, 1898, to 30th June, 1899.

J. E. P.

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INTERNATIONAL CONGRESS OF PREHISTORIC ANTHROPOLOGY AND ARCHÆOLOGY.

The twelfth International Congress of Prehistoric Anthropology and Archæology will be held in Paris at the Collège de France between August 20th and 25th, and the opening session, in the Palais des Congrès of the Paris Exhibition.

The President of the Congress is M. Alexandre Bertrand, member of the Institute, and Keeper of the Museum of National Antiquities at St. Germain-en-Laye; the General Secretary, Dr. R. Verneau, of the National Museum of Natural History, (Rue Broca 148); and the Treasurer, M. Henri Hubert, to whom application for membership, and payments of subscriptions should be addressed.

It is hoped that the Anthropological Institute may be fully represented in the proceedings of the Congress, and in the numerous excursions which are contemplated to French sites in Brittany, and Central and Southern France.

The following provisional programme of discussion has been issued by the Organising Committee:—

I. *Applications de l'Anatomie comparée et de la Paléontologie à la question de l'origine de l'homme.* Malgré la valeur des travaux déjà publiés sur la question, les documents ne sont pas assez nombreux pour permettre d'établir ou même d'esquisser la phylogénie de l'espèce humaine. Aussi convient-il de signaler toute découverte nouvelle de Lémurien ou de Singe fossile et tous les faits anatomiques de nature à établir des relations entre le Lémuriens, les Singes et l'Homme.

II. *L'aurore du paléolithique.* Dans ces dernières années, des publications ont été consacrées à des silex taillés provenant du Pliocène de l'Inde, du *Forest-bed* de Cromer, de dépôts donnés comme *préglaciaires* de l'Angleterre, des alluvions inférieures de Mesvin ou de la vallée de la Somme, etc. Il serait important d'examiner si ces découvertes ou d'autres analogues, qui pourraient être communiquées, remontent à une époque antérieure à celle des espèces dites *chaudes* (Hippopotame, Éléphant antique, Rhinocéros de Merck, etc.).

III. *Comparaison des objets d'industrie humaine trouvés dans les alluvions quaternaires de l'ouest de l'Europe avec les objets analogues recueillis dans les autres pays du monde.* La découverte en Égypte et dans d'autres contrées de l'ancien et du nouveau monde d'instruments en pierre reproduisant tout à fait les formes des silex taillés recueillis dans les alluvions quaternaires de l'Europe occidentale, soulève une question des plus intéressantes: on doit se demander si tous ces objets sont synchroniques. Pour résoudre cette question, il est nécessaire, non seulement de comparer morphologiquement les objets dont il s'agit, mais surtout d'établir l'âge exact des gisements nouvellement découverts.

IV. *Passage du paléolithique au néolithique.* Les recherches faites au Mas-d'Azil, à Campigny, dans l'Yonne, en Écosse, etc. ont convaincu beaucoup d'archéologues que le passage du paléolithique au néolithique s'est fait d'une façon insensible. Les harpons cylindriques en bois de renne ont été remplacés par des harpons plats en bois de cerf; des galets en partie usés ont fait leur apparition, de même que le pic et le tranchet; la poterie se montrerait avant la hache polie. Ces faits ont besoin d'être confirmés par de nouvelles observations; la stratigraphie et la paléontologie doivent venir au secours de l'archéologie. Enfin, le passage a dû se faire de différentes façons et à des époques diverses suivant les lieux. Il est donc nécessaire de mettre en œuvre toutes les méthodes de recherches, toutes les trouvailles nouvelles pour résoudre cette importante question.

V. *Description des édifices sur pilotis comparables aux habitations lacustres ou palafittes des Alpes, découverts dans les diverses régions de l'Europe.* En dehors de l'étude de ces édifices et des objets qui y ont été recueillis, il serait intéressant de déterminer quelles sont les sépultures contemporaines des habitations sur pilotis. Pour la Suisse, en particulier, est-il possible d'établir un parallélisme exact entre les trouvailles faites dans les lacs et sur leurs rives?

VI. *Passage du néolithique aux métaux.* Les objets en cuivre pur sont-ils assez nombreux et présentent-ils des formes assez spéciales pour faire admettre l'existence d'un véritable âge du cuivre ayant précédé l'âge du bronze? Il est à désirer que de nouvelles observations, accompagnées d'analyses chimiques, soient apportées au Congrès.

VII. *Rapports de la civilisation dite méditerranéenne: 1° avec les civilisations égéenne et mycénienne; 2° avec les civilisations analogues de l'Europe centrale.* Il n'existe pas encore de travail d'ensemble tenant compte, par exemple, des résultats découlant des recherches faites récemment en Égypte. Le point essentiel serait de pouvoir déterminer le centre de diffusion (européen ou asiatique) des formes industrielles et artistiques dont on constate l'apparition vers la fin de l'époque néolithique.

VIII. *Aire géographique, divisions et chronologie du deuxième âge fer du.*—

L'aire géographique de la civilisation du deuxième âge du fer est encore mal délimitée, en particulier vers le Sud-Ouest et le Nord-Est. Il serait très utile d'indiquer sur une carte les stations de cette époque. Il serait non moins utile d'apporter des observations nouvelles susceptibles de confirmer ou de modifier la classification de Tischler. Enfin, la chronologie du deuxième âge du fer a besoin d'être précisée pour chaque région. Ne pourrait-on pas, dans ce but, tirer parti des trouvailles de vases grecs à figures rouges et de monnaies gauloises ?

IX. *Caractères anatomiques de l'homme primitif et des races humaines préhistoriques.*—Il convient non seulement de décrire les caractères des races préhistoriques, mais encore de les interpréter. Tous les faits nouveaux relatifs au *Pithecanthropus*, en particulier, présenteraient un intérêt considérable.

X. *Survivances ethnographiques pouvant jeter quelque lumière sur les mœurs et l'état social des populations préhistoriques.*—La Mélanésie en général, l'Australie en particulier, l'Amérique du Sud, les Pays Barbaresques, etc., ont fourni, dans ces derniers temps, la matière d'observations très intéressantes dans cet ordre d'idées. Ce serait faire œuvre fort utile que de classer et de comparer les données nouvelles ainsi recueillies.

XI. *Jusqu'à quel point les analogies d'ordre archéologique ou ethnographique peuvent-elles autoriser l'hypothèse de relations ou de migrations préhistoriques?*—Il est indispensable de distinguer les faits qui s'expliquent par les mêmes états sociaux ou les mêmes milieux de ceux qui sont de nature à autoriser l'hypothèse d'une identité de race.

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#### INTERNATIONAL CONGRESS ON THE HISTORY OF RELIGION.

On the initiative of the Professors of the Section of the Science of Religion at the École des Hautes Études, an International Congress on the History of Religion will be held at the Sorbonne in connection with the Paris Exhibition from September 3rd to 9th inclusive.

The President is M. Albert Réville, Professor in the Collège de France; the Secretaries are M. Léon Marillier and M. Jean Reville, the editors of the *Revue de l'Histoire des Religions*, and the Treasurer, to whom subscriptions should be addressed, is M. Philippe Berger, Member of the Institute, and Professor in the Collège de France, Quai Voltaire 3.

The work of the Congress will be divided into eight sections as follows:—

- I. The religions of uncivilised peoples; and of the pre-Columbian civilizations of America.
- II. The history of the religions of the Far East: China, Japan, Indo-China, the Mongols, and the Finns.
- III. The history of the religion of Egypt.
- IV. The history of the so-called Semitic Religions, (a) in Chaldaea, Assyria, and Asia Minor; (b) Judaism and Islam.
- V. The history of the religions of India and Siam.
- VI. The history of the religions of Greece and Rome.
- VII. The religions of the Germans, Celts, and Slavs: and the data of prehistoric archæology in Europe.
- VIII. The history of Christianity (a) in the first centuries A.D.; (b) in the middle ages; (c) in the modern world.

The discussions contemplated by the Congress are of an exclusively historical kind, and questions of dogma or sectarian belief are entirely prohibited. Communications are admitted in English, French, German, Italian, and Latin.

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## INDEX.

## A.

- Abaw-Efik, High Priest of Egbo Society, 21.  
 Accad, significance of the name, 13.  
 "Across the Border," written by Oliver (*rev.*), 17.  
 Afá Society in Little Popo, Togoland, 24.  
 Afridis (Pathán Tribe), Col. Sir T. H. Holdich on, 2.  
 Aggry Beads, Levins' Collection of, 119.  
 Ahmad Shah, Founder of Durani Empire, 3.  
 Aikon, Religious Play in West Africa, 24.  
 Al Mahfuza, Syrian Settlement in Sindh, 19.  
 Alldridge (J. T.), on Mr. F. Marriott's paper, 26; on Sierra Leone and the Protectorate, 50, 64.  
 Alligator Society, see Secret Societies of W. Africa, 21.  
 Auriferous Gravel Man in California, by W. H. Holmes (*rev.*), 334.  
 Ambela, 4.  
 Amphidromy, by A. C. Haddon, 315.  
 Andaman and Nicobar Islands, Customs similar to those of the Niger, 63.  
 Andaman (South) Languages, by M. V. Portman (*rev.*), 181.  
 Antropometria, by Rudolfo Livi (*rev.*), 324.  
 Arab Tribes of our Indian Frontier, by Col. Sir T. H. Holdich, 10.  
 Arabic, our Naval Terms Derived from, 14.  
 Arabs Inhabiting Makrán, 11.  
 Arch, Entirely Unknown in Mexico, 40.  
 Astrology and the Divining Rod, by T. V. Holmes, 313.

- Aurangzebe, 4.  
 Australian Tree Carvings, by Herbert Perkins, 152.  
 Authority and Archæology, edited by D. G. Hogarth (*rev.*), 187.  
 Axe Currency in Dr. Sologuren's Collection, Oaxaca, 46.  
 Ayaka, a Society of the Ibibeo Tribe, 22.  
 Aztecs, see Corner (W.), "Mitla," 31.

## B.

- Babar, Founder Mogul Dynasty, 4.  
 Bâgh, Centre of the Maidan Plain, 7.  
 Bajaor, Country North of the Khaibar, 3.  
 Balfour (H.), Natural History of the Musical Bow (*rev.*), 340.  
 Baluch Khan, a Notorious Freebooter in Makrán, 17.  
 Baluchi, of Arab Origin, 15.  
 Barakzai, Present Dynasty of Kabul, 3.  
 Bar Rohi, see Brahui, a Mountaineer, 13.  
 Barotsi (Kingdom of), by Alfred Bertrand (*rev.*), 188.  
 Bazid, Afghan Adventurer, 7.  
 Beddoe (J.), on Col. Holdich's paper, 18; on the Mediæval Population of Bristol, 142.  
 Beginnings of Currency, by Col. R. C. Temple, 99.  
 Bela, Mediæval Arab City in West India, 15.  
 Bell (C. Napier), Tangweera (*rev.*), 339.  
 Bendé, 30 miles from Long Ju Ju, 52.  
 Benedikt (Moriz), Kathetometry (*rev.*), 333.  
 Ben-i-Israel, Descendants of Babylon Captives, 2.



- Bennett (A. L.), elected, 1; Ethnographical Notes on the Fang, 66.  
 Bennett (Mrs. G. Nevill), elected March, 1899, 28.  
 Benson (Miss M.), the Temple of Mut in Asher (*rev.*), 191.  
 Berry (R. A. J.), elected, 98.  
 Bertrand (Alfred), the Kingdom of the Barotsi (*rev.*), 188.  
 Bicycle and Crime, by T. V. Holmes, 313.  
 Bird Gods, by Charles de Kay (*rev.*), 186.  
 Blind (Edmund), Elsass-Lothringens, Anthropologie (*rev.*), 341.  
 Boas (Franz), the Cephalic Index (*rev.*), 332.  
 Bodio, the Fetish King, 62.  
 Boledi, W. Indian Tribe Spoken of by Ptolemy, 13.  
 Bora Rites, Initiation of Youths into Manhood, Australia, 153.  
 Borfima, a Fetish Medicine in Sherbro, 26.  
 Bozdars, an Arab Confederation, 15.  
 Brahui Tribe Inhabiting East and West of Kalat, 12.  
 Brandt (S.), Elsass-Lothringens, Anthropologie (*rev.*), 341.  
 Brinton (D. G.), on Toltecs and Maya Culture, 47, 48.  
 Bristol, Mediæval Population of, by J. Beddoe, 142.  
 British Association, Dover, 1899, Anthropology, 198.  
 Brown (J. Allen), on G. Clinch's paper, 139; Stone Implements, Pitcairn Island, 210.  
 Buddhism among Dilazaks, 4.  
 Bulu, a People in German West Africa, 67.  
 Bunds, Dams to form Water Reservoirs, 14.  
 Buner, Conuntry North of the Khaibar, 3.  
 Burmah, Nats or Spirits of, by R. C. Temple, 217.  
 Buschan (G.), Centralblatt für Anthropologie (*rev.*), 196.  
 Bugti, a Frontier Arab Tribe, 18.  
 Bugtis, an Arab Confederation, 15.  
 Caldwell (Dr. Bishop of Tinnevely), Sepulchral Urns, S. India, 290.  
 Cambridge Expedition, S. H. Ray on Linguistic Results of, 219; New Guinea and Torres Straits, 211.  
 Canada, British Association Committee on, 210.  
 Cappadoce, Mission en, by Ernest Chantre (*rev.*), 320.  
 Cardi, Comte de, on Fitzgerald Marriott's paper, 27; Juju Laws and Customs, 51.  
 Caruana (A. A.), Ancient Pagan Tombs, etc., of Malta (*rev.*), 329; Royal Public Library of Malta (*rev.*), 329. •  
 Central African Vocabularies, see Juba Expedition, 244-9.  
 Centralblatt für Anthropologie (*rev.*), 196.  
 Cephalic Index, by Franz Boas (*rev.*), 332.  
 Chadwick (H. M.), the Cult of Othin (*rev.*), 189.  
 Chakdara, in the Swat district, 6.  
 Chaldeans inhabiting Makrán, 11.  
 Chamkanni, a Tribe on Borders of Tirah, 7.  
 Chandrabans, the Lunar Race of Rajputs, 3.  
 Chantre (Ernest), Mission en Cappadoce 1893-94 (*rev.*), 320.  
 Chengis Khan, the Destroyer, 4.  
 Chichén Itzá, ruin in Yucatan, 47.  
 Christian (F. W.), elected November, 1899, 225.  
 Chronology, Prehistoric, by O. Montelius, 308.  
 Church (Col. George Earl), on Corner's paper on Mitla, 48.  
 Circumcision, a Sign of Freedom, 56.  
 Clark (A.), Judicial Oaths used on Gold Coast, 310.  
 Clemens (E.), Vocabulary of Galluma Tribe, 192.  
 Clinch (G.), Prehistoric Man in Kent and Surrey, 123; Correction of Error in last Journal, 315.  
 Clitoridectomy, used in Niger Delta, 59.

- Codice Pictorico de los Antiguos Nauas, F. del Paso y Troncoso (*rev.*), 337.  
 Coffey (George), Copper Celts in Ireland, 206.  
 Cole (J. A. Abayomi), Writer on Poro, 21.  
 Copan, founded by Toltecs, 47.  
 Corner (Wm.), Mitla, 29.  
 Craft (Mabel C.), Hawaii Nei (*rev.*), 335.  
 Crooke (Wm.), on Col. Holdich's paper, 20; on Dr. A. L. Bennett's paper on the Fang, 97; on Col. Macdonald's Juba Expedition, 243; on Dr. Westermarck's Arab Ginn, 268; Primitive Rites of Disposal of the Dead, India, 271.  
 Cult of Othin, by H. M. Chadwick (*rev.*), 189.  
 Cursing-stick, used in Niger Delta, 58, 60.

## D.

- Damba Koh, Hills on which Dambas are built, 12.  
 Damb, Stone Huts on hill sides at Makrán, 12.  
 Davenport (C. B.), Statistical Methods (*rev.*), 326.  
 Deane (Major), 64.  
 Decades Americanæ, by Dr. E. T. Hamy (*rev.*), 338.  
 Defiled by touching a corpse—by earth from a grave—by Long Ju-Ju men, 53.  
 Dialect Changes in Polynesian Languages, by Rev. S. Ella, 154.  
 Dilazaks, Extinct Tribe of Western India, 4.  
 Disregard for Death in Niger Delta, 55.  
 Dolmens and Burial Mounds in Japan, by W. Gowland (*rev.*), 183; of Japan and their Builders, by W. Gowland (*rev.*), 183.  
 Duckworth (W. L. H.), elected, 1; on a Skull from Syria, 145; Anthropometrical Instruments, 270, 313; German Congress at Lindau, September, 1899, 314.  
 Duranis, modern name of Afghans, 2.

## E.

- Eaglehawk and Crow, by John Mathew (*rev.*), 197.  
 Eddowes (Alfred), on Stonehenge, 209.  
 Egbo, Tiger or Leopard, Society on Niger, 21.  
 Elliot (Sir H.), 15.  
 Elmslie (W. A.), Among the Wild Ngoni (*rev.*), 191.  
 Elsass-Lothringens, Anthropologie, ed. by Dr. G. Schwalk (*rev.*), 341.  
 Estlake (Allan), the Oneida Community (*rev.*), 327.  
 Ethiopians, inhabiting Makrán, 11.  
 Ethnology, by A. H. Keane (*rev.*), 184.  
 Evans (A. J.), Fibulæ from North Africa, 207.

## F.

- Fang, Ethnographical Notes on the, by Dr. A. L. Bennett, 66; Degeneration of, from Syphilis, 70; most companionable People, 71; Dancing a Favourite Amusement, 72; Painting, Tattooing, Cicatrization, 73; Working of Iron, Fire, Machinery, 76; Food, Cooking, 81; Religion, Fetish or Biang (medicine), 85; are Cannibals, 68, 83.  
 Father-making, Worship of Ancestors, 54.  
 Ferishta, 15.  
 Fillmore (J. C.), Harmonic Structure of Indian Music (*rev.*), 330.  
 Fitzgerald Marriott (H. P.), Secret Societies of West Africa, 21.  
 Flint Implements in Glacial Deposits, Cheshire, by J. Lomas (*rev.*), 333.  
 Foreman (John, F.R.G.S.), the Philippine Islands (*rev.*), 191.  
 Frazer (J. G.), Golden Bough, 63.  
 Funeral Customs of the Niger Delta, 53.

## G.

- Galton (Francis), Finger Prints, 199.  
 Gardner (Ernest), on Montelius' Prehistoric Chronology, 308.

- Garson (J. G.), edited 3rd Edition "Anthrop. Notes and Queries," 197.  
 Gesture-curses, in the Niger Delta, 57.  
 Ghilzais, 3.  
 Gichki, a Sikh tribe who succeeded the Boledi, 13.  
 Ginn (Arab), Nature of, in Morocco, 252.  
 Gourlay (Miss J.), the Temple of Mut in Asher (*rev.*), 191.  
 Gowland (Wm.), 50, 140; on Wm. Crooke's Primitive Rites, Disposal of Dead, India, 292; Dolmens of Japan (*rev.*), 183.  
 Græco-Bactrian Coins Rare in Makrán, 19.  
 Gray (John), Ethnographical Work in Scotland, 213.  
 Greg (T. T.), elected, 1.  
 Greenstone Hammer, Chisel, and Axe, from Mitla, 46.  
 Griffith (F. L.), elected March, 1899, 20.  
 Gualuma Vocabulary, by E. Clement, 192.

## H.

- Haddon (A. C.), Amphidromy, 315.  
 Hajjaj despatched 6,000 Syrians to Sindh from Aleppo, 19.  
 Hamy (E. T.), Reproductions of Nahua Manuscripts (*rev.*), 337; Decades Americanæ (*rev.*), 338.  
 Harmonic Structure of Indian Music, by J. C. Fillmore (*rev.*), 330.  
 Haverfield (F.), Roman origin of Mediæval Charm, 306.  
 Hawaiian Language, see Rev. S. Ella's Paper, 157.  
 Hawaii Nei, Mabel C. Craft (*rev.*), 335.  
 Head-dress, Survival of Ancient Type, in Mexico, 38.  
 Heckethorn (C. W.), writer on Poro Societies, 21.  
 Henry (E. R.), Finger Prints, 198.  
 Hingol River Delta, Site of Tomeros, 11.  
 Hobson (Mrs. M. A.), elected March, 1899, 20.  
 Hogarth (D. G.), editor of Authority and Archæology (*rev.*), 187.

- Holdich (T. H.), on Swatis and Afridis, 2, 10.  
 Holmes (W. H.), of Field Columbian Museum, 36; Auriferous Gravel Man in California (*rev.*), 334.  
 Holmes (T. V.), Astrology and the Divining Rod, 312; the Bicycle and Crime, 313.  
 Honolulu, Bishop, Museum Ethnology, No. 1 (*rev.*), 326.  
 Horsford (Cornelia), Vinland and its Ruins (*rev.*), 334.  
 Hrdlička (Ales), Study of the Normal Tibia (*rev.*), 332; Ancient Mexican Skeleton (*rev.*), 333.  
 Huastecas, a Maya People of Rio Panuco, 47.  
 Human Sacrifices in West Africa, 24; not usual in Ju-Ju Society, 52.  
 Huxley Memorial Statue, Report of Unveiling of, 316.

## I.

- Ibibeo, a West African Society, 22.  
 Ibo or Eboe Tribe, in Hinterland of Niger Delta, 52.  
 Ibu Haukal, writer on Arabic, and Sindhian, 19.  
 Ichthyophagi, a Race Discovered by Nearchus, 19.  
 Idiong or Idion Society, Higher Branch of Egbo, 23.  
 Ifé or Illé Ifé, Sacred Place in Yoruba, 25.  
 Igbo (see Egbo), 21.  
 Ilaxcaltecs assisted Cortez against Mexico, 49.  
 Illing (K. E.), Der Periplus des Hanno (*rev.*), 185.  
 Imperri, District of West Africa, 26.  
 India, Primitive Rites of Disposal of the Dead (Wm. Crooke), 271.  
 Indo-Scythians, known as Sakas, 19.  
 International Congress (12th) of Prehistoric Anthropology and Archæology (Paris, 1900), 342; of History of Religion, 342.

## J.

- Jadite found in Mexico, 38.  
 Jalawán, West Islands of Kalat, 12.  
 Jolly-boat, from Arabic "Jalaba," 14.  
 Jones (T. Rupert), on Mr. Swynnerton's paper, 123.  
 Juba Expedition, by Lieut.-Col. J. R. L. Macdonald, 226.  
 Judicial Oaths used on Gold Coast, by A. Clark, 310.  
 Ju-Ju Laws and Customs, by M. Le Comte de Cardi, 51.

## K.

- Kaliph Yejid persecuted Syria, end of seventh century, 15.  
 Karamojo (see Juba Expedition), 234.  
 Katahwiri Society for Men, on Gold Coast, 21.  
 Katahwiriba Society for Women, on Gold Coast, 21.  
 Kathetometry, by Prof. Dr. Moriz Benedikt (*rev.*), 333.  
 Kay (Charles de), "Bird Gods" (*rev.*), 186.  
 Keane (A. H.), "Ethnology," and "Man, Past, and Present" (*rev.*), 184.  
 Kej Valley, near Mand, in Makrán, 15.  
 Kennedy (Mr. J.), on Col. Holdich's paper, 18.  
 Kez Macoran, Saracenic in 1290, 15.  
 Khalmat, on the Makrán Coast, 15.  
 Khalmat chiefs of Makrán, 14.  
 Kingsley (Miss M. H.), on M. le Comte de Cardi's paper, 61.  
 Kish, ancestor of Afghans, 2.  
 Kivo Ibo River, in West Africa, 24.  
 Kru Coast, Social Classification on, 62.  
 Kusháns, part of the Confederacy of the Yue-chi, 19.

## L.

- Labia Pudendi* artificially joined in Niger Delta, 60.  
 Laghmani, Afghan race of Laghman Valley, 4.

- Lang (Andrew), elected, 1.  
 Lawrence (G. F.), elected November, 1899, 225.  
 Lee (Mrs. Kate), elected November, 1899, 225.  
 Leonard (A. C.), of Niger Coast Protectorate, 52.  
 Leopard Society, see Secret Societies of W. Africa, 21.  
 Levin (M. L.), Aggry Beads, see Col. Temple's paper, 119.  
 Lewis (A. L.), on G. Clinch's Prehistoric Man, 139.  
 Livi (Rudolfo), *Antropometria* (*rev.*), 324.  
 Lomas (Joseph), Flint Implements, Glacial Deposits, Cheshire (*rev.*), 333.  
 Long Ju-Ju Men on the Kivo Ibo River, W. Africa, 24; in the Ibo Country, 52.

## M.

- Macdonald (J. R. L.), Notes on the Ethnology of Tribes met with in Juba Expedition, 1897-99, 226.  
 Macalister (A.), *Anthropometry*, 203.  
 MacIver (David), elected, 251; *Anthropometry in Egypt*, 202.  
 MacLagan (R. C.), elected November, 1899, 225.  
 MacRitchie (D.), *Memories of the Picts* (*rev.*), 340.  
 Mahmandsai, see Mohmands, 5.  
 Mahmud of Ghazni, Apostle of Islam, 4.  
 Mahomed Kassim invaded India, 705 A.D., 14.  
 Maidan, Headquarters of the Afridis, 6.  
 Makrán, Province of Beluchistan, 10.  
 Malta, Royal Public Library, by Dr. A. A. Caruana (*rev.*), 329; *Ancient Pagan Tombs, etc.*, by Dr. A. A. Caruana (*rev.*), 329.  
 Mand, a District in Makrán, 15.  
 Man, Past and Present, by A. H. Keane (*rev.*), 184.  
 Manillas, Iron Circlets worth 1d., 23.  
 Mansura, Arab Settlement in Sindh, 19.



Marett (R. R.), Pre-animistic Religion, 217.  
 Marco Polo in India in 1290, 15.  
 Mari, a Frontier Arab Tribe, 18.  
 Marriott (F.), on Bennett's paper on Fang, 97.  
 Marris, an Arab Confederation, 15.  
 Masai, see Juba Expedition, 232.  
 Masks, West African, see Mr. H. P. Fitzgerald Marriott's paper, 25.  
 Mathew (John), Eaglehawk and Crow (*rev.*), 197.  
 Maudslay (A. P.), *Biologia Centrali-Americana*, 36; on Wm. Corner's paper, 46.  
 Maya Quiché Towns, Utatlan, Iximche, Chacujal, 47.  
 Mayne (Col.), Conductor of Campaign in Makrán, 17.  
 'Mbuike Society in the Ibibeo Tribe, 22.  
 McDougall (W.), Sense of Touch and Pain, Cambridge Expedition, 222.  
 Medes, inhabiting Makrán, 10.  
 Mediæval Charm, Roman origin of, by F. Haverfield, 306.  
 Meiklejohn (General), 6.  
 Memories of the Picts, by D. MacRitchie (*rev.*), 340.  
 Mendi Country on West Coast Africa, 65.  
 Mexican Architecture and Ornament, 33.  
 Mexican Fortification, 45.  
 Mexico, Prof. F. Starr's Address on, 141.  
 Meyer (A. B.), the Negritos (*rev.*), 191.  
 Mingal, see Mongul, 12.  
 Mitla, paper by W. Corner on, 29.  
 Mockler (Col.), Political Agent at Makrán, 12.  
 Mohmand country North of the Khaibar, 3.  
 Mongols inhabiting Makrán, 11.  
 Montelius (Oscar), Prehistoric Chronology, 308.  
 Moreno (F. P.), Explorations in Patagonia (*rev.*), 334.  
 Morocco, Nature of the Arab Ginn in, 252.

Mosaic Ornament at Mitla, 36, 46.  
 Musical Bow, Natural History of, by Henry Balfour (*rev.*), 340.  
 Musical Instrument at Fetish Ceremonies, Plate VIII, 61.  
 Mut (Temple of, in Asher), by Miss M. Benson and Miss J. Gourlay (*rev.*), 191.  
 Muzaffarnagar District in North West Provinces, 20.  
 Myers (C. S.), Hearing, Smell, Taste, etc., Cambridge Expedition to Torres Straits, 222; Music in Torres Straits, 223.

## N.

Nadir Shah, 4.  
 Nahua Manuscripts, reproductions of, by Dr. E. T. Hamy (*rev.*), 337.  
 Nalma Races on Pacific side of Mexico, 47.  
 Nanám Society for Men, on Gold Coast, 21.  
 Naoshera, 4.  
 Naoshirwani, a Persian Tribe of Kharan, 13.  
 Naval Terms, derived from Arabic, 14.  
 'Ndém Efik the Great (I)dém of Kalabar, 21.  
 Nearchus discovered the Ichthyophagi, 19.  
 Negritos, by A. B. Meyer, M.D. (*rev.*), 191.  
 Neolithic Age, see G. Clinch's Stone Implements, 124.  
*Neritina Fluvialilis*, Discovery of, in Thames, by H. Stopes, 302.  
 New Guinea and Torres Straits, Cambridge Expedition, 211.  
 New Zealand, Kotahas or whip-slugs, in British Museum, 304; carved canoe-head from, 305.  
 Ngoni, Among the Wild, by Dr. W. A. Elmslie (*rev.*), 191.  
 Nicobar, see Col. Temple's Beginnings of Currency, 99.  
 Normal Tibia, by Ales Hrdlička (*rev.*), 332.  
 Notes and Queries, edited by Dr. Garson and C. H. Read (*rev.*), 197.

## O.

- Odudua, the Mother of the Gods, Yoruba Goddess, 61.  
 Old Kalabar, home of chief Egbo Society, 21.  
 Oliver, author of "Across the Border," 17.  
 Olorum, Yoruba for supreme god, 25.  
 Oneida Community, by Allan Estlake (*rev.*), 327.  
 Onyekolum Society in the Ibibeo Tribe, 22.  
 Oracles, by Wise Woman in West Africa, 24.  
 Orakzais, Pathán Tribe of West India, 2.  
 Oricha, Yoruba word for Fetich, 25.  
 Orientation of Temples, by F. C. Penrose, F.R.S. (*rev.*), 336.  
 Oshogbo, Jebu name of a secret Society, Yoruba, 25.

## P.

- Pahtan, Syriac for Rudder, name of Kish, 2.  
 Paktun, see Pathán.  
 Paktun-wali, Pathán Code of Civil Observances, 2.  
 Palæontology, Text Book of, Vol. I, by K. A. Von Zittel (*rev.*), 331.  
 Palenque founded by Toltecs, 47.  
 Pandomanagai, Pygmies of India, 12.  
 Parikanoi, significance of the name, 13.  
 Parkinson (R.), Ethnography of Solomon Islands (*rev.*), 341.  
 Parsiwans, 3.  
 Partington (J. Edge), New Zealand Kotahas, 304; Note on Stone Battle-Axe, New Zealand, 305.  
 Parvez, the last of the Sagsanian Monarchs, 19.  
 Patagonia, Explorations in, Dr. F. P. Moreno (*rev.*), 334.  
 Pathán, Inhabitants of Western Borders of India, 2; Dictionary of, Calcutta, 1899 (*rev.*), 335.  
 Paul (J. D.), elected March, 1899, 20.

- Pehlvi used for inscriptions on Sakas coins, 19.  
 Penrose (F. C., F.R.S.), Orientation of Temples (*rev.*), 336.  
 Periplus des Hanno, by Dr. K. E. Illing (*rev.*), 185.  
 Perkins (Herbert), Some Australian Tree Carvings, 152.  
 Persians Inhabiting Makrán, 11.  
 Petrie (W. M. Flinders), Sources of the Alphabet, 204; Sequences in Prehistoric Remains, 295; on Montelius' Prehistoric Chronology, 308.  
 Philippine Islands, by John Foreman (*rev.*), 191.  
 Photographs, British Association Committee to provide for the collection of, 201.  
 Physical Anthropology, Bibliography of, Prof. Dr. E. Schmidt (*rev.*), 333.  
 Pitcairn Island, Stone Implements of, by J. Allen Brown, 210.  
 Polynesian Museum, Ethnology, Honolulu, No. 1 (*rev.*), 326.  
 Poro Societies in Sierra Leone, 21.  
 Portman (M. V.), Languages of S. Andaman Group (*rev.*), 181.  
 Prehistoric Anthropology and Archaeology, 12th International Congress (Paris, 1900), 342.  
 Prehistoric Man in Kent and Surrey, by G. Clinch, 123.  
 Prehistoric Remains, Sequences in, by Prof. W. M. Flinders Petrie, 295.  
 Psychology in Torres Straits, by Dr. W. H. R. Rivers, 219.  
 Pushtu, Language of Patháns, 2.

## Q.

- Quākery, Ju-Ju King of New Calaban, 51.  
 Quick (A. S.), elected November, 1899, 225.

## R.

- Races of Europe, by W. Z. Ripley (*rev.*), 188.  
 Rain-makers in West Africa, 23.  
 Rajputs inhabiting Makrán, 11.

- Ray (Sidney H.), Linguistic results of Cambridge Expedition to Torres Straits, 219.
- Read (C. H.), 1, 28, 65, 98, 123, 225, 270; edited 3rd edition "Anthropological Notes and Queries," 197; Note on Carved Canoe Head, New Zealand, 305.
- Rekia, a Desert-Bred Tribe of West India, 15.
- Religion, History of, International Congress on (1900) (*rev.*), 342.
- Ridgeway (Prof.), on Col. Temple's paper, 121.
- Rinds, Arab Confederations, 15.
- Ripley (W. Z.), the Races of Europe (*rev.*), 188.
- Rivers (W. R. H.), Genealogical Statistics, 200; on Skin Colour, 204; Psychology of Cambridge Expedition to Torres Straits, 219.
- Roh country, inhabited by Rohillas, 2.
- Rohillas, W. India, inhabitants of Roh, 2.
- Rucker (Miss S. E.), elected November, 1899, 225.
- S.
- Sacrifice of Animals over dead Chieftains, 22.
- Saiad Akbar the prophetic Mullah of Tirah, 7.
- Sakas, Indo-Scythians in Makrán, 19.
- Sakastene or Sejistân, named by Sakas, 19.
- Samoan Alphabet, see Rev. S. Ella's paper, 155.
- Sandeman (Sir Robert), 18.
- Sarabur, a branch of the Afghan family, 3.
- Sarawán, East Highlands of Kalat, 12.
- Sartor Fakir, the bareheaded, 6.
- Schmidt (E.), Bibliography of Physical Anthropology (*rev.*), 333.
- School Children, Abnormal, British Association Committee on, 203.
- Schwalk (G.), editor of *Elsass-Lothringens*, Anthropology (*rev.*), 341.
- Science and Faith, by Dr. Paul Topinard (*rev.*), 317.
- Secret Societies of West Africa, by H. P. Fitzgerald Marriott, 21.
- Seligmann, Dr. C. G., on New Guinea, Torres Straits, and Queensland, 212.
- Shah Zaman, son of Timur, 4.
- Sherbro, West African Coast, home of Human Leopard Society, 26.
- Sikhs inhabiting Makrán, 11.
- Silchester, British Association Committee on, 209.
- Sinjaranis of the Helmund, from Syria, 15.
- Siri Society, secret society in Egypt, 24.
- Sistan District of W. India, 13.
- Skeleton, ancient Mexican, by Ales Hrdlička (*rev.*), 333.
- Skull from Syria, by W. L. H. Duckworth, M.A., 145.
- Skyths inhabiting Makrán, 11.
- Smith (Eveleigh), on Mr. F. Marriott's paper, 23, 25.
- Sologuren (Dr.), his collection, Oaxaca, 46.
- Solomon Islands, Ethnography of, by R. Parkinson (*rev.*), 341.
- Starr (Frederick), Address on objects from Mexico, 141.
- Statistical Methods, by C. B. Davenport (*rev.*), 326.
- Stone Implements from Gwalior, by F. Swynnerton, 141.
- Stone lance-heads from Mitla and Oaxaca, 45.
- Stopes (H.), on discovery of *Neritina Fluvialis* in Thames, 302.
- Swat, country north of the Khaibar, 3.
- Swatis, Col. Sir T. H. Holdich on, 2.
- Swynnerton (F.), elected, 98; Stone Implements from Gwalior, 141.
- Symbols of Yoruba Secret Society, Plate VIII, 61.
- T.
- Tahitian Language, see Rev. S. Ella's paper, 156.
- Tajaks, husbandmen of S. Baluchistan, 13.
- Tangweera, by C. Napier Bell (*rev.*), 339.

Tatta in Sind, place of the King's sepulchres, 15.  
 Temple (R. C.), on C. de Cardi's paper, 63; Beginnings of Currency, 99; Burmese Nats, or spirits, 217.  
 Thana, in the Swat District, 6.  
 Timur the Tartar devastates W. India, 4.  
 Tocher (J. F.), elected November, 1899, 225.  
 Toltecs (= Builders), Originators of Maya Culture, 47.  
 Tomeros, Hingol River Delta, 11.  
 Trial by Ordeal in the Ibibeo Tribe, 22.  
 Troncoso (F. del Paso y), Mexican Manuscripts (*rev.*), 337.  
 Turcomans confused with Sakas, 20.  
 Turks inhabiting Makrán, 11.  
 Twin-children, the Mother to be Killed, 57.  
 Tylor (E. B.), on Dr. Westermarck's "Arab Ginn," 251, 269.  
 Tzapoteco, former inhabitants of Mexico, 29.

## U.

Uluga, "pig's nose," a W. African Tribe, 22.  
 United Kingdom, Report of Committee, Ethnographical Survey, 215.

## V.

Van de Poel, his West African masks, 25.  
 Vinland and its Ruins, by Cornelia Horsford (*rev.*), 334.  
 Voice of Oro, similar to Australian Bull Roarer, 61.

## W.

Wanganui Museum, New Zealand, 4th Annual Report (to 30th June, 1899) (*rev.*), 342.  
 Waziris, Pathán Tribe of West India, 2.  
 Westermarck (E.), Nature of the Arab Ginn, 252.  
 Williams (J. W.), elected November, 1899, 225.  
 Wourtsimi, Foretelling Priests or Prophets, 63.

## Y.

Yue-chi, a great Indo-Scythic horde, 19.  
 Yusufzai, Branch of Afghan race, 3.

## Z.

Zaaxas Hacienda  $2\frac{1}{2}$  miles S.E. from Mitla, 42.  
 Zain Khan, Kabul tax-collector, 4.  
 Zakka Khel, a leading Afridi tribe, 7.  
 Zittel (Carl A. von), Textbook of Palæontology (*rev.*), 331.



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### MEETINGS DURING THE SESSION 1899-1900.

1899 TUESDAY,	NOVEMBER 7, 21.	1900 TUESDAY, MARCH	13, 27.
"	DECEMBER 12.	"	APRIL 24.
1900	JANUARY 9, 30.*	"	MAY 15, 29.
"	FEBRUARY 13.	"	JUNE 12.

Specimens are Exhibited, and Coffee served at 8 p.m.; Reading of Papers commences at 8.30.

Each Fellow has the privilege of introducing two friends (ladies or gentlemen) to the Evening Meetings.

#### \*ANNIVERSARY MEETING.

*The Council will meet at Five o'clock on the days of Ordinary Meetings.*

#### *Extracts from the Regulations respecting the Election of Fellows:—*

Every person desirous of admission to the Institute as a Fellow shall be proposed and recommended by at least two Fellows, one of whom shall certify his personal knowledge of such candidate. (*Ladies are eligible as Fellows.*)

Each Fellow shall pay an Annual Contribution of two guineas, which may at any time be compounded for by a payment of £21.

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There is at present no Entrance Fee.

Fellows residing in the country, as well as in London, can borrow books from the Library.

Persons who wish to become Fellows of the Institute are requested to communicate with the Secretary.

## CONTENTS—continued.

	PAGE
THE HARMONIC STRUCTURE OF INDIAN MUSIC. By John Comfort Fillmore -	330
TEXT BOOK OF PALEONTOLOGY. By Karl A. von Zittel - - - -	331
THE CEPHALIC INDEX. By Dr. Franz Boaz - - - - -	332
A STUDY OF THE NORMAL TIBIA. By Ales Hrdlička - - - - -	332
ON SOME FLINT IMPLEMENTS, FOUND IN THE GLACIAL DEPOSITS OF CHESHIRE AND NORTH WALES. By Joseph Lomas, F.G.S. - - - - -	333
EXPLORATIONS IN PATAGONIA. By Dr. F. P. Moreno - - - - -	334
VINLAND AND ITS RUINS. By Cornelia Horsford - - - - -	334
HAWAII NEL. By Mabel C. Craft - - - - -	335
A DICTIONARY OF THE PATHAN TRIBES OF THE NORTH-WEST FRONTIER OF INDIA - - - - -	335
ON THE ORIENTATION OF TEMPLES. By F. C. Penrose, M.A., etc. - - -	336
REPRODUCTIONS OF NAHUA MANUSCRIPTS. By Francisco del Paso y Troncoso	337
TANGWEERA: Life and Adventures among gentle Savages. By C. Napier Bell, M.Inst.C.E. - - - - -	339
THE NATURAL HISTORY OF THE MUSICAL BOW. By Henry Balfour, M.A. -	340
INTERNATIONAL CONGRESS OF PREHISTORIC ARCHAEOLOGY AND ANTHROPOLOGY	342
INTERNATIONAL CONGRESS ON THE HISTORY OF RELIGION - - - - -	344
INDEX - - - - -	345

The Council desire it to be understood that in giving publicity to the Papers read before the Institute, and the discussions thereon, they accept no responsibility for the opinions or statements of individual authors.

Fellows of the Institute are earnestly requested to add copies of any photographs of anthropological interest which they may possess, or be able to obtain, to the collection in the library.

### SPECIAL NOTICE.

Through the generosity of Mr. A. FEATHERMAN, the Anthropological Institute is enabled to announce for gratuitous distribution a limited number of copies of his book, "THOUGHTS AND REFLECTIONS," which contains the results of his anthropological studies, and presents a commentary on the materials embodied in his seven volumes, *The Social History of Mankind*, most of which are now wholly out of print.

These "THOUGHTS AND REFLECTIONS" form a demy octavo volume of 352 pages, first published in 1894, and will be sent to any address, carriage forward, on receipt of an application addressed on or before October 1st, 1900, to the

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In the event of the number of applications exceeding the number of copies which are available for distribution, the Institute reserves to itself the right to determine the mode in which they shall be assigned.

### NOTES AND QUERIES ON ANTHROPOLOGY.

The Third Edition, edited for the British Association for the Advancement of Science, by J. G. GARSON, M.D., and CHARLES H. READ, F.S.A. Published by the Anthropological Institute of Great Britain and Ireland, 3, Hanover Square, London, W., price 5s. (to Members of the British Association, and Fellows of the Anthropological Institute, on personal application at the Institute, 3s. 6d.).



# CONTENTS.

	PAGE
<b>MEETING OF NOVEMBER 7th, 1899.</b> C. H. READ, Esq. F.S.A., President, in the Chair	225
<b>Notes on the Ethnology of Tribes met with during Progress of the Juba Expedition of 1897-99.</b> By Lieut.-Colonel J. R. L. MACDONALD, R.E. (With Plates XXIX and XXX)	226
<b>Notes on the Masai Section of Lieut.-Colonel Macdonald's Vocabulary.</b> By Mrs. S. L. HINDE	248
<b>Notes on the Swahili Section of Lieut.-Colonel Macdonald's Vocabulary.</b> By Miss M. E. WOODWARD	250
<b>MEETING OF NOVEMBER 21st, 1899.</b> Professor E. B. TYLOR, D.C.L., LL.D., F.R.S., in the Chair	251
<b>The Nature of the Arab Ginn, illustrated by the Present Beliefs of the People of Morocco.</b> By EDWARD WESTERMARCK, Ph.D.	252
<b>MEETING OF DECEMBER 12th, 1899.</b> C. H. READ, Esq. F.S.A., President, in the Chair	270
<b>Primitive Rites of Disposal of the Dead, with Special Reference to India.</b> By W. CHOOKE, B.A.	271
<b>Sequences in Prehistoric Remains.</b> By Professor W. M. FLINDERS PETRIE. (With Plates XXXI to XXXIII)	295
<b>On the Discovery of <i>Neritina fluviatilis</i> with a Pleistocene Fauna and Worked Flints in High Terrace Gravels of the Thames Valley.</b> By H. STOPES	302
<b>ANTHROPOLOGICAL REVIEWS AND MISCELLANEA—</b>	
NEW ZEALAND KOTAHAS OR WHIP SLINGS, FOR THROWING DARTS. (With Plate XXXIV)	304
NOTE ON A CARVED CANOE HEAD FROM NEW ZEALAND. (With Plate XXXV, 1)	305
NOTE ON A STONE BATTLE-AXE FROM NEW ZEALAND. (With Plate XXXV, 2)	305
NOTE ON THE ROMAN ORIGIN OF A MEDIEVAL CHARM	306
PREHISTORIC CHRONOLOGY. By Professor Oscar Montelius	308
ON THE JUDICIAL OATHS USED ON THE GOLD COAST	310
NOTE ON THE CONGRESS OF THE GERMAN AND VIENNESE ANTHROPOLOGICAL SOCIETIES HELD AT LINDAU FROM THE 4TH-7TH OF SEPTEMBER, 1899	314
THE HUXLEY MEMORIAL STATUE IN THE NATURAL HISTORY MUSEUM	316
SCIENCE ET POL. L'ANTHROPOLOGIE ET LA SCIENCE SOCIALE. Par Paul Topinard	317
MISSION EN CAPPADOCE 1893-1894. Par Ernest Chantre	320
ANTHROPOMETRIA. By Rudolfo Livi	324
STATISTICAL METHODS: WITH SPECIAL REFERENCE TO BIOLOGICAL VARIATION. By C. B. Davenport, Ph.D.	326
THE ONEIDA COMMUNITY. By Allan Estlake	327
ANCIENT PAGAN TOMBS AND CHRISTIAN CEMETERIES IN THE ISLANDS OF MALTA. By Dr. A. A. CAPUANA	329

[P.T.O.]

